DOCUMENT RESUME

ED 359 917 IR 015 473

AUTHOR Harbour, J.; And Others
TITLE Distributed Training for the Reserve Component: Instructor Handbook for Computer Conferencing.
INSTITUTION Idaho National Engineering Lab., Idaho Falls.
SPONS AGENCY Army Research Inst., Boise, ID.
PUB DATE Apr 90
NOTE 162p.
PUB TYPE Guides - Non-Classroom Use (055)

EDRS PRICE MF01/PC07 Plus Postage.
DESCRIPTORS Adult Learning; Computer Assisted Instruction; *Computer Networks; *Course Organization; *Distance Education; High Risk Students; Microcomputers; Military Training; Peer Teaching; Postsecondary Education; Small Group Instruction; Student Characteristics; Student Motivation; *Teaching Methods; *Teleconferencing
IDENTIFIERS *Army Reserves; Computer Mediated Communication

ABSTRACT

The purpose of this handbook is to provide background and teaching recommendations for instructors who will be remotely conducting Reserve Component training using asynchronous computer conferencing techniques. The recommendations in this handbook are based on an international review of the literature in distance learning and experience gained from developing and conducting Reserve Component training. The handbook is based on a remotely conducted, distributed training model called A System for Managing Asynchronous Remote Training (SMART). The cornerstones of the SMART model are that training is asynchronous in time, computer mediated, and distributed to soldiers' homes. The SMART classroom is one in which small groups of students work together as a group by asynchronously communicating with each other and the instructor(s) using computer conferencing; lessons may be paper-based, computer-based, or audio/video-based. The handbook is divided into three sections: (1) background information on the SMART model and typical student characteristics of adults learning at home; (2) techniques for conducting SMART classroom training (e.g., group and individual learning techniques, motivational techniques); and (3) methods for troubleshooting likely course problems (e.g., computer problems, lack of progress or achievement). A companion Handbook for SMART Course Conversion and Implementation is also available. (Author)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality

- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

ED359917

Distributed Training for the Reserve Component: Instructor Handbook for Computer Conferencing

J. Harbour
K. Daveline
R.A. Wells
D. L. Schurman
H. Hahn

April 1990
U.S. Army Research Institute

IR015473

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Ruth H. Phelps

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

BEST COPY AVAILABLE

FOREWORD

Limited time and wide geographical dispersion of both units and individuals in the National Guard and Army Reserve, i.e., the Reserve Component (RC) make it difficult and costly for soldiers to travel to branch schools for training. Therefore, the RC is exploring alternatives that will use technology to bring training and educational opportunities to the soldiers' homes. One of these alternatives is the creation of remotely conducted classes in which individuals are linked with each other and their instructors asynchronously using computer-mediated communications.

This Handbook is designed to assist instructors who will be conducting such distributed, asynchronous, computer-mediated training. The Handbook was developed by the ARI-Boise office within the charter of the Training Technology Field Activity-Gowen Field (TTFA-GF), whose mission is to improve Reserve Component training effectiveness and efficiency through the testing and application of technology. The research task supporting this mission is entitled "Application of Technology to Meet Reserve Component Needs" and is organized under "Training for Combat Effectiveness" program area. The National Guard Bureau and TRADOC HQ sponsored this project under the Memorandum of Understanding signed 12 June 1985 that established the TTFA-GF. Project results have been briefed to the National Guard Bureau, the Office of the Chief of Army Reserve, TRADOC HQ, and the USA Engineer School. This handbook will be used by TRADOC and RC implementers to assist instructors in using distributed computer-mediated training methods to teach soldiers.

EDGAR M. JOHNSON
Technical Director

1201543

Table of Contents

Introduction - Read This Page First 1

Main Index 2

General Information and Topic Overviews - Section A A-1

- The SMART Environment A-3
- Characteristics of the Adult Learner A-27
- General Principles of Learning A-33
- High Risk Student Indicators A-39

Instructional Techniques and "How To" Information - Section B . B-1

- SMART Online Etiquette B-3
- Establishing Class Norms B-13
- Group Learning in SMART B-23
- Individualized Instructional Techniques B-59
- Motivating the SMART Student B-69
- Course Preparation Duties B-97

Troubleshooting Specific Problems - Section C C-1

READ THIS PAGE FIRST

This guide has been written to assist instructors, trainers, and other key personnel in the SMART environment. Since there are many ways to implement remote training, the guidelines presented in this document are based on using the SMART prototype concept only. Use of the guidelines for other models of implementation will need to be adjusted accordingly.

The guide is **NOT** written to be read like a book, from cover to cover. However, it has been written to be used as a job aid, answering specific questions and hopefully meeting your specific needs when they arise. For ease of use, the guide is divided into three sections:

- The first section **(A)** provides **general information** and overviews of various topics related to the SMART environment. When you "want to know about something," this is the section that you should use. On the first page (A1) of this section is an index to the section topics.

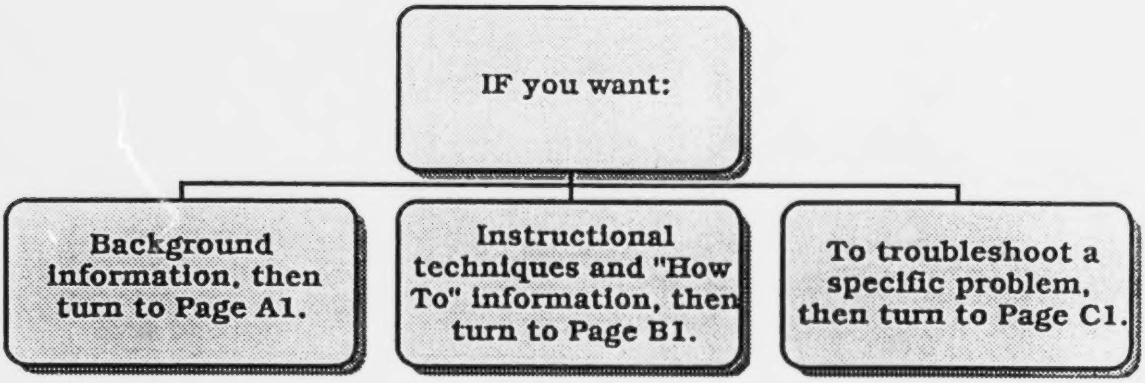
- The second section **(B)** provides **step-by-step, "how to" information** on various techniques that can be used in SMART. When you want specific directions on "how to do something," this is the section that you should turn to. On the first page (B1) of this section is an index to the section topics.

- The third section **(C)** is a **troubleshooting guide**. When you have a specific problem, this is a good place to look first. On the first page (C1) of this section is an index to the section topics.

The **main index**, located on Page **2**, will direct you to the appropriate section. The index at the front of each section will then direct you to the specific topics that make up that section. A general index to all of the topics covered in the manual is located on page 3. If you are new to SMART, we suggest that you first begin by reading the topic "SMART," located in Section A on page A2. After this initial introduction, you should be guided through the manual simply by your own curiosity, interests, and specific needs.

TURN TO PAGE 2 FOR MAIN INDEX

MAIN INDEX



IF you want:

Background information, then turn to Page A1.

Instructional techniques and "How To" information, then turn to Page B1.

To troubleshoot a specific problem, then turn to Page C1.

BEST COPY AVAILABLE

INSTRUCTOR GUIDE GENERAL OVERVIEW

GENERAL INFORMATION AND TOPIC OVERVIEWS

- SMART environment (A3)
- Characteristics of adult learners (A27)
- Principles of learning (A33)
- High risk student indicators (A39)

TECHNIQUES AND "HOW TO" INFORMATION

- SMART online etiquette (B3)
- Establishing class norms (B13)
- Group learning techniques (B23)
  - Peer tutoring (B25)
  - Group discussions (B29)
  - Small group instruction (B35)
  - Expert groups (B44)
  - Synchronous briefings (B49)
- Individual instructional techniques (B59)
- Motivating SMART students (B69)
- Course preparation duties (B97)

TROUBLESHOOTING SPECIFIC PROBLEMS

- Computer software/hardware problems (C8)
- Understanding the SMART environment (C2)
- Group instructional techniques (C3)
- Individual instructional techniques (C4)
- Normal class operations (C5)
- Role of SMART instructor (A21)
- Student problems (C6)

SECTION A

If you want general information and topic overviews about:

- The SMART environment, then turn to Page A3.
- Characteristics of the adult learner, then turn to Page A27.
- General principles of learning, then turn to Page A33.
- High risk student indicators, then turn to Page A39.

BEST COPY AVAILABLE

INSTRUCTOR NOTES

SMART: AN INTRODUCTION

THE SITUATION

In its efforts to maintain overall readiness, the U.S. Army is faced with some unique challenges in regard to the readiness of its Reserve Components (RC). The RC is made up of the Army Reserve and the Army National Guard. Although training is only one important component of readiness, it is many times more difficult to provide adequate training to the RC than to the Active Army. The importance of adequate training for the RC is acute, however, since the RC makes up more than 50% of the total Army strength.

For example, the RC has only 39 training days available per year, typically distributed over 12 weekends and a two week annual training session as compared with the continuous training received by the Active Army.

RC units are scattered all over the United States at more than 4,000 armories and reserve centers. As a result, there are large numbers of soldiers with low geographical density. Low density Military Occupational Specialties (MOSs) often do not justify local courses and, in general, there are not enough qualified instructors within the RC system for all MOSs at all locations.

Travel, then, to resident schools is required, but training for those in the RC must accommodate civilian and personal commitments,such as job and family responsibilities. Thus, resident training, commonly viewed as the best the Army has to offer, may not be ideal for the RC soldier.

What are the current RC training options? Usually, Reservists complete course requirements through a combination of resident branch schools, such as the Engineer School , Reserve Forces (RF) schools, and the Army Correspondence Course Program (ACCP). Table 1 presents a

INSTRUCTOR NOTES

comparison of these training options with respect to throughput, quality, availability, and cost.

In this table, "throughput" refers to the number of students that can be trained to a given level within a year, "quality" refers to the level of training, "availability" refers to the ease with which RC soldiers can attend, and "cost" refers to the resource impact on the Army.

Clearly, residence training will yield not only a high throughput but also high quality instruction. However, it is not very accessible to the RC soldier, who must juggle job and family schedules to attend. Further, the cost to the Army, in terms of travel, per diem, and pay, is quite high.

Conversely, RF School training sacrifices some quality and throughput for greater availability and lower costs. RF courses are often easier to fit into civilian commitments. However, the quality of RF courses is not always consistent across locations.

Correspondence courses, although readily available and low in cost, have much lower throughput and quality of training than the other two alternatives. Correspondence courses cannot measure performance nor measure leadership, verbal skills, nor many hands-on skills. Further, the dropout rate of correspondence courses is quite high, often as much as 50%.

Table 1. Comparison of RC Training Options

Type of Training	Throughput	Quality	Availability	Cost
Residence	high	high	low	high
RF School	moderate	moderate	moderate	moderate
Correspondence	low	low	high	low

INSTRUCTOR NOTES

In addition to training gained through fulfillment of formal course requirements, RC soldiers also receive a great deal of unit training . While this training may be readily available at a low cost, its quality is likely to be inconsistent. Further, it is unclear whether all soldiers receive all of the training that they need when this method is used. More likely, soldiers receive only that training for which expert guidance is available within their own unit.

THE NEED

What is ideally needed for the RC is a training system that minimizes cost and optimizes quality, throughput, and availability. Such a training system would be delivered at the soldier's home or home armory/reserve center. Further, the system would provide good throughput, user acceptance, and cost effectiveness.

SMART: A POTENTIAL SOLUTION

One possible solution to this need is a remotely delivered, computer-mediated , training system. We call this system SMART, which stands for System for Managing Asynchronous Remote Training. As a new instructor, the SMART environment may seem somewhat alien. Although it is different, you will find many similarities to classroom training. The same objectives can be accomplished but by different methods. Lets begin our exploration of SMART by finding out what this "thing" is!

SMART is a **distributed** training system. It functions as:

- **a communication system,**
- **a combination of delivery media, and**
- **a course management system.**

It provides:

- **geographically distributed training,**
- **asynchronous and synchronous training, and**
- **computer-mediated training and communications.**

Computerized means for soldiers and instructors to communicate asynchronously from distributed locations.

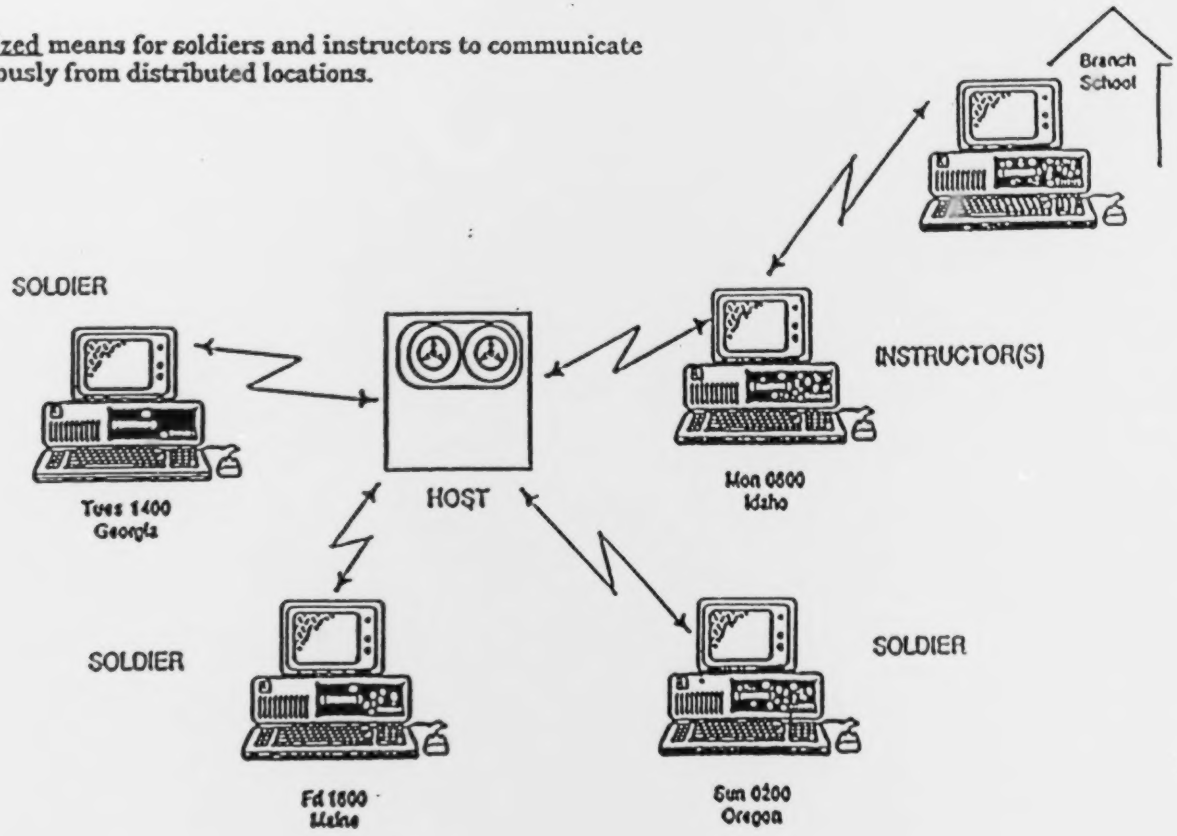
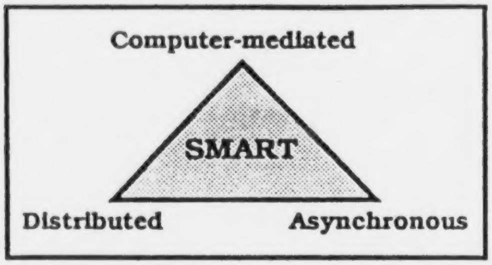

Branch School
SOLDIER
Tues 1400
Georgia
HOST
INSTRUCTOR(S)
Mon 0600
Idaho
SOLDIER
Fri 1600
Maine
SOLDIER
Sun 0200
Oregon

Figure 1. The SMART Communications Network.



SMART is a concept for conducting remote training. The specific hardware and software used is not important for understanding and implementing the concept.

The following paragraphs briefly describe the functions and characteristics of SMART. As is illustrated in Figure 1, SMART provides a **communication system**, allowing an instructor to remotely communicate with students, students to communicate with the instructor, and students to communicate with each other, all in a distributed fashion. The major medium of communication in SMART is through the computer, using existing telephone lines to access a mainframe where data are stored. Other names for this type of communication include asynchronous computer conferencing and computer-mediated communication.

SMART also provides a **combination of delivery media**. All types of instruction can be integrated in SMART training, including: paper-based materials, computer-assisted instruction (CAI), storyboards, formal and informal discussions, problem solving groups, peer tutoring, expert groups, capstone exercises, simulations, video- and audiotapes, interactive video disks (IVD), and hands-on activities.

Finally, SMART provides a **course management system**, allowing the instructor to control and administer lessons, exercises, and tests, while automatically maintaining rosters, grade books, and attendance records. SMART also enables the instructor to provide feedback on the performance of various activities to students.

SMART allows **geographically distributed** learners to participate in the instruction without the need to come together in one location. Students and instructional staff can be located anywhere there is access to a telephone. Students can work from their homes, armories or reserve centers, and instructors can teach from Branch schools, RF schools, or their homes. With portable computers, students and instructors alike can continue their participation in classes even when traveling.

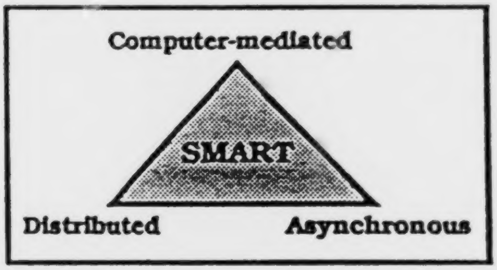
BEST COPY AVAILABLE

INSTRUCTOR NOTES

Most of the instruction delivered via SMART is accessed **asynchronously**. That is, not everyone must participate at the same time. This flexibility of scheduling makes SMART quite adaptive to personal time constraints. However, it also means that there are built-in time delays before all students receive the instruction and that certain activities, such as group discussions, will take longer than they would in the face-to-face environment. When time delays are not practical, such as in a formal briefing to a senior officer, SMART allows **synchronous** communication. In synchronous communication, all students access SMART at one time and work together to accomplish a given task. When the task is completed, they return to the asynchronous mode.

Since SMART is **computer-mediated**, it requires that each student have: a computer with a modem (a device that allows communication over the telephone) , appropriate software, telephone links, a host computer which supports the uploading (transmitting to someone) and downloading (receiving) of information, and a certain amount of computer expertise. This system facilitates meaningful, connected discussions by a group of students. These discussions take place on the computer as students read and comment on written input from each other.

SMART, then, is many things. Perhaps the three most important characteristics of SMART, however, are that it is distributed, predominantly asynchronous, and computer-mediated.



Resident Student	SMART Student	Notes
Monday		
0700 Wakes up and takes a shower	Drives to work	The resident student is able to devote the entire day to course work; the SMART student devotes more than a third of the day to civilian employment
0800 Reports to the first lecture of the day	Arrives at the office and begins the work day	
0930 Takes a break and chats with other students	Tries to reach a classmate by phone; no luck	
0945 Begins a small group exercise	Gets a work assignment to write a major report by Friday	The resident student has face-to-face interaction with classmates so group exercises are accomplished quickly in a pre-scheduled time period; the SMART student must coordinate group work adding administrative time to the activity
1145 Finishes the small group exercise; breaks for lunch	Classmate returns call; spends 20 minutes scheduling a synchronous meeting for Friday	
1300 Completes a CAI lesson at the computer lab	Eats lunch at desk while doing a SMART reading assignment	
1400 Goes to lecture	Resumes office work	
1700 Returns to quarters	Drives home	
1800 Has dinner with classmates	Has dinner with family	
1930 Does a homework assignment	Checks kids' homework	
2030 Watches Monday night football	Works on SMART -- does a CAI and a paper-based exercise	Only after fulfilling civilian job and family requirements can the SMART student work on the course
2330 Goes to bed	Goes to bed	

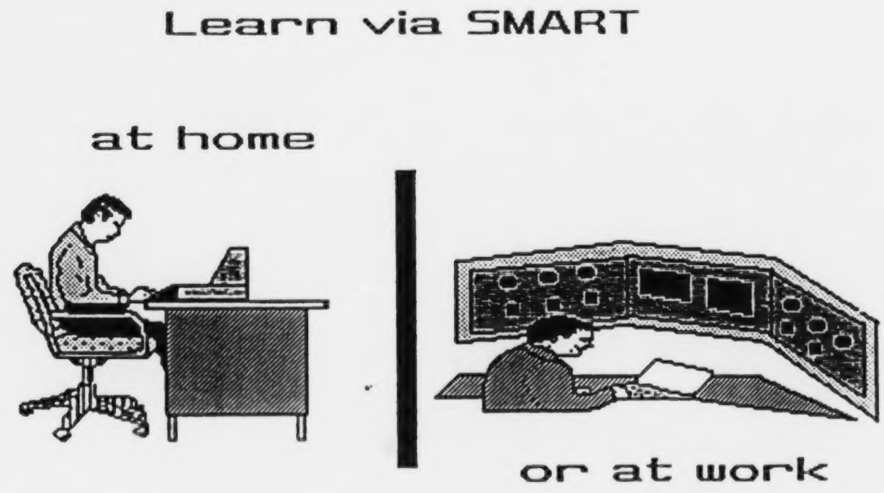
Figure 2. A day in the life of a resident and SMART student.

HOW DOES SMART APPEAR TO THE STUDENT?

As in some other distributed learning situations, like correspondence, students learning via SMART are experiencing a tabletop learning environment - - they are likely to be sitting at the kitchen table or at a desk in their homes, working alone in the sense of not having other students physically present. Since they are reservists, they are fitting their training around their daily routines and may be working on very different schedules. These factors combine to make the SMART learning experience quite different from that of taking a resident course. Figure 2 depicts segments of a "day in the life" of a resident student and a SMART student, highlighting differences between the two.

For the resident student, one day is very much like another, with course requirements being allocated to scheduled time blocks and with few pressing distractions from course work. For the SMART student, this is not the case. Each day brings different challenges to overcome in order to complete course requirements. However, the SMART learning environment offers a convenience, flexibility, and quality that allows soldiers to successfully meet these challenges. Figure 3 shows typical segments of a "week in the life" of a SMART student.

Once working in SMART, one experiences a very different environment from the face-to-face classroom. To illustrate this difference, Figure 4 shows what the SMART student may see and do during a typical computer session that

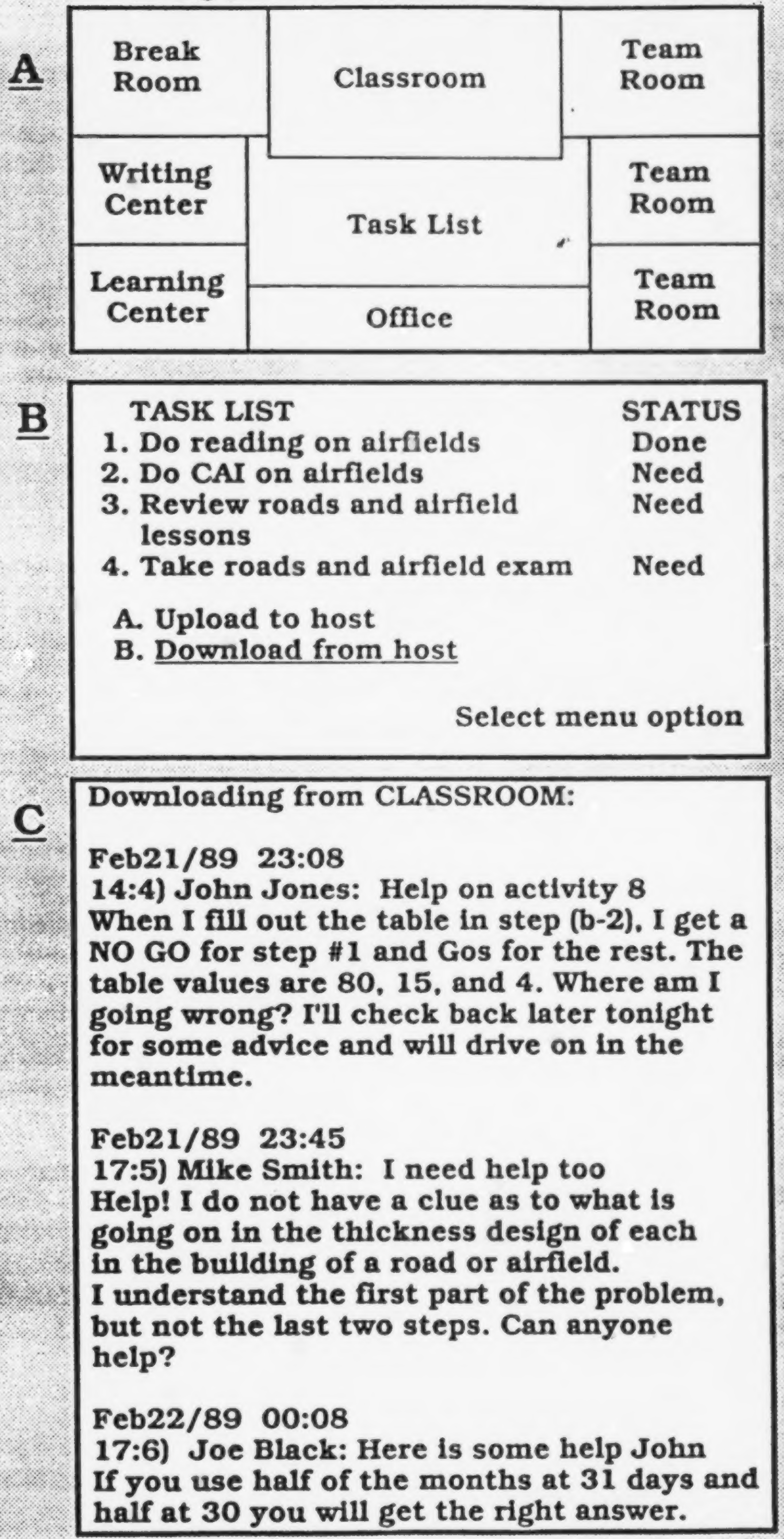


INSTRUCTOR NOTES

SMART Student	Notes
Tuesday	
1900 Report to RC unit for weekly meeting	In addition to juggling family and civilian job requirements, the SMART student must perform RC military duties.
2330 Return from meeting and go to bed	
Wednesday	
0900 Get phone call about a work meeting to attend tomorrow; requires travel across the state	SMART students often experience unexpected events in their lives (such as job travel, job-related overtime, or family illness) which prevent them from working on course requirements for one or more days.
1700 Return home to pack; put a message online to classmates regarding unexpected business trip	
Thursday	
1830 Return home from meeting; eat dinner with family	
2030 Start working in SMART -- download, read through downloaded information and type replies, do a CAI, upload messages and CAI answers, organize information	Working in SMART implies more than just completing a lesson; there are administrative duties such as organizing information and computer communication tasks as well.
Friday	
1800 Get online to begin synchronous meeting	Group activities that take place with ease in a face-to-face setting may require a great deal of coordination when conducted via computer; in synchronous meetings, all group members must be on the computer at the same time; even in synchronous meetings, there is a time delay while students respond to one another so the same activity takes longer using computers than face-to-face.
1830 All classmates are ready to begin the group exercise; the instructor hands out the assignment	
2200 Send answer to group assignment to instructor and go offline	
Saturday	
0800 Go on all day family outing	
Sunday	
1900 Go online to ask a question during online office hours	Instructor hours must accommodate students' schedules.

Figure 3. A week in the life of a SMART student.

Figure 4. Sample SMART session.


A
Break Room
Classroom
Team Room
Writing Center
Task List
Team Room
Learning Center
Office
Team Room
B
C

TASK LIST STATUS
1. Do reading on airfields Done
2. Do CAI on airfields Need
3. Review roads and airfield lessons Need
4. Take roads and airfield exam Need

A. Upload to host
B. Download from host

Select menu option

Downloading from CLASSROOM:

Feb21/89 23:08
14:4) John Jones: Help on activity 8
When I fill out the table in step (b-2), I get a NO GO for step #1 and Gos for the rest. The table values are 80, 15, and 4. Where am I going wrong? I'll check back later tonight for some advice and will drive on in the meantime.

Feb21/89 23:45
17:5) Mike Smith: I need help too
Help! I do not have a clue as to what is going on in the thickness design of each in the building of a road or airfield.
I understand the first part of the problem, but not the last two steps. Can anyone help?

Feb22/89 00:08
17:6) Joe Black: Here is some help John
If you use half of the months at 31 days and half at 30 you will get the right answer.

BEST COPY AVAILABLE

takes place at 2030 hours on Thursday.

(A) The first thing seen after turning on the computer is an analog of an electronic school. This school contains "rooms" or places where various activities occur. For example, feedback on tests is given in the office, small group activities take place in the team room, class discussions take place in the classroom, general chit-chat takes place in the break room, self-contained lessons such as CAIs and storyboards are taken in the learning center, and homework assignments and tests are done in the writing center. The school metaphor serves as an aid to understanding the learning environment for the student who is moving from the known world of the face-to-face classroom to the unknown world of SMART.

(B) The task list serves as an organizer, whereby the student selects activities to perform. In addition to selecting self-contained course requirements, such as performing a CAI, the student may elect to send or receive information to/from other students and/or the instructor. This is done by "uploading" or "downloading" to/from the host computer. The task list also serves a course management function by keeping track of what lesson activities the student still needs to complete.

(C) Students would probably first elect to download information from the host computer. By downloading, they would receive answers to any questions they might have posed to the instructor, messages from classmates, and feedback on graded activities already completed. Only that information sent to the host computer since they last downloaded is provided. Information is organized hierarchically by net, item, response, and date. Before continuing through our overview of the SMART session, an explanation of these concepts is in order.

A net is the computer equivalent of a room in the electronic school where activities take place. Information from similar types of activities are stored together in a net. For example, in Figure 4 (C), the net is the CLASSROOM. This is where discussions about technical topics take place. As can be seen from the figure, students are asking questions about course content.

An item is a statement or discussion about a single subject or

INSTRUCTOR NOTES

thought. In Figure 4 (C), you will note **designators** such as 14:4 and 17:5. The number to the left of the colon is an item number which keys the student to the item being discussed. In the example in Figure 4, Item 14 is a technical discussion on Road Design, while Item 17 is a technical discussion on Airfield Design.

In the designators, the number to the right of the colon is a response number. A **response** is a comment about an item or another response. Responses are displayed in the order in which they are received, as indicated by the time stamps shown in Figure 4 (C).

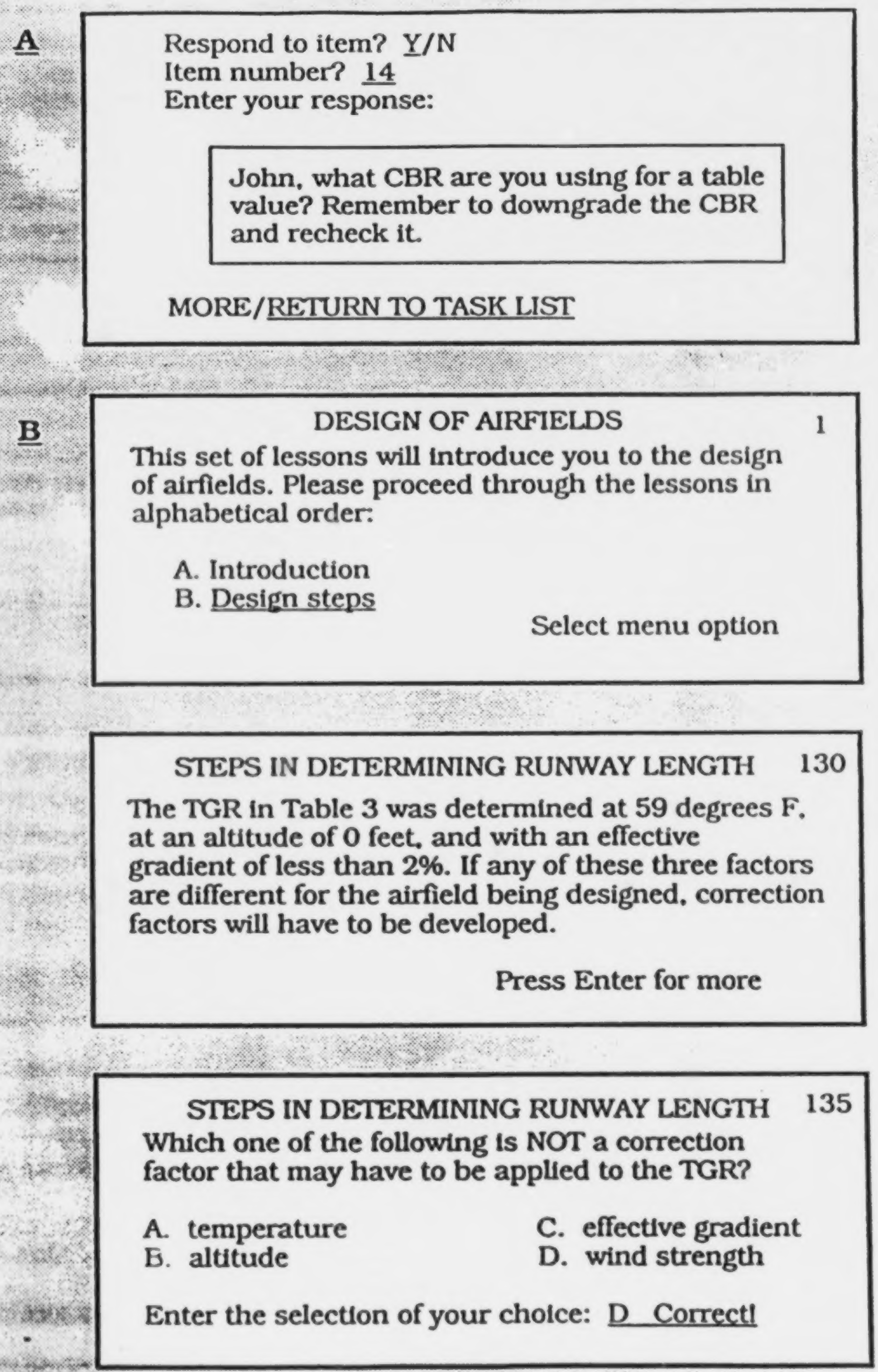
The excerpts shown in Figure 4(C) are transcripts from a real class, with only the names changed. They represent a portion of the student-to-student dialog taking place in about a one-hour period on a given evening. Several features of the transcript are noteworthy:

- **Time stamps** - as was stated previously, SMART students do most of their course work during evening and weekend hours. The time stamps reflect Eastern time. For example, "John Jones," a student who lives in Maryland, was working on the course at 11 p.m.

- **Organization** - because students are working asynchronously, even though responses 17:5 and 17:6 follow one another chronologically, they do not follow logically. Response 17:6 is a response to a comment posted at some time previous to 17:5. Further, not all students are working on the same course topics, as evidenced by activity in two items which do not refer to the same content areas. The result of this format is that students must devote time and effort to organizing downloaded information into a logical (ie., by item) sequence, usually by printing the information and binding it into a notebook.

- **Peer learning**- these items are being used by the students to ask and answer technical questions. While the instructor has the ultimate responsibility of answering technical questions, he or she is not the only resource available to the student with a question, as evidenced by "Joe Black's" response. Unlike the face-to-face environment, where it is usual for the instructor to speak and the soldier to listen, computer conferencing affords equal air time to all and soldiers are free to respond to one another in any public discussion.

Figure 5. Sample SMART session.



A

Respond to item? Y/N
Item number? 14
Enter your response:

John, what CBR are you using for a table value? Remember to downgrade the CBR and recheck it.

MORE/RETURN TO TASK LIST

B

DESIGN OF AIRFIELDS 1

This set of lessons will introduce you to the design of airfields. Please proceed through the lessons in alphabetical order:

A. Introduction
B. Design steps

Select menu option

STEPS IN DETERMINING RUNWAY LENGTH 130

The TGR in Table 3 was determined at 59 degrees F, at an altitude of 0 feet, and with an effective gradient of less than 2%. If any of these three factors are different for the airfield being designed, correction factors will have to be developed.

Press Enter for more

STEPS IN DETERMINING RUNWAY LENGTH 135

Which one of the following is NOT a correction factor that may have to be applied to the TGR?

A. temperature
B. altitude
C. effective gradient
D. wind strength

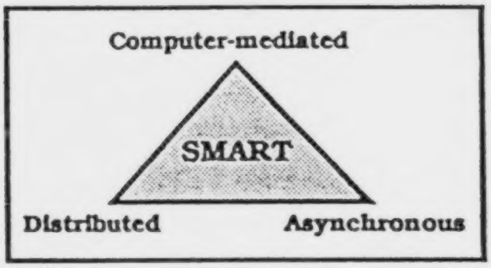
Enter the selection of your choice: D Correct!

BEST COPY AVAILABLE

Returning to the discussion of how a SMART session appears to the student, let's examine a snapshot of the remaining tasks, as shown in Figure 5.

(A) SMART may prompt for comments on items and responses just read. Depending on the specific software used, SMART may transform entries into language understandable by the conferencing system, so the students do not have to learn the peculiarities of a particular conferencing system. Finally, SMART returns students to the task list when they are finished downloading and responding.

(B) The next task selected is a CAI lesson. SMART automatically finds and displays the correct lesson. As the student moves through the lesson, information is presented and questions are asked. When the student answers a question, he or she receives immediate feedback as to whether or not the response was correct. Serving its function as a course management system, SMART stores answers and automatically sends them to the instructor when the student next selects the upload function from the task list. In fact, selecting the upload function causes all newly created data, such as the responses shown in in Figure 5 (A) and answers to CAIs and quizzes, to be automatically transmitted to the host computer in the format required by the conferencing system. Typically, the student would upload after completing all other computer-mediated activities during a particular session.



HOW DOES SMART APPEAR TO THE INSTRUCTOR?

The fact that SMART is characterized by being distributed, asynchronous and synchronous, and a computer-mediated training and communication system, also impacts the SMART instructor with respect to both work schedule and duties performed. The emphasis in SMART on computer mediation and

BEST COPY AVAILABLE

SMART Instructor		Notes
Monday		
0800-1100	Go online to receive messages and scores on activities, write replies and feedback, and upload	Like their students, the instructors access SMART via the task list; they are able to see grades on activities that are scored automatically, pick up assignments to grade, post grades, receive questions and comments and post answers to them; students who are not getting online either because they have fallen behind or because they are having computer problems must be contacted by phone
1100-1500	Update records of student progress, phone students who have fallen behind	
1500-1700	Take hotline call from a student having software problems; locate and send new disks	
Tuesday		
0800-1000	Download/upload	
1000-1100	Obtain clarification from proponent school on topic students have questions on	In SMART, instructors have the opportunity to consult with other experts or written resources before answering a question
Wednesday		
0800-1100	Download/upload	
Thursday		
0800-1200	Download/upload	The time needed for downloading and uploading will vary by volume
1200-1600	Grade exams and homework	
Friday		
0800-1100	Download/upload	
1200-1400	Add funds to computer accounts	SMART instructors do both class administration (grading, etc.) and computer administration tasks
1800	Go online for synchronous meeting	
1830-2200	All students are ready to begin the group exercise; give the assignment and monitor progress	Synchronous activities must be scheduled around the students' other activities
2200-2300	Grade group assignment and put feedback online	Prompt feedback is critical in SMART
Saturday		
0800-1100	Download/upload	To ensure timely turnaround, instructors must be on the computer daily
Sunday		
0800-1100	Download/upload	
1900-2100	Go online for office hours	

Figure 6. A week in the life of a SMART instructor.

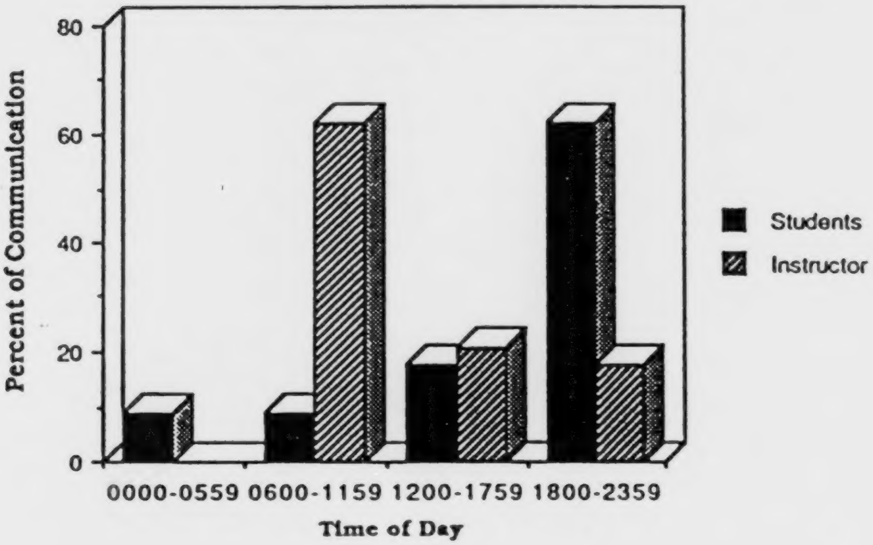
independent learning shifts the emphasis of the role of the instructor from primarily that of a deliverer of instruction to more that of a manager/facilitator and a counselor. That is, the SMART instructor spends less time providing course content via lecturing or other classroom techniques than does the resident instructor and more time guiding students through the learning experience by directing their studies, answering questions, and providing performance feedback.

Figure 6 provides highlights of a "week in the life" of a SMART instructor. For the purposes of this illustration, it is assumed that the instructor works full time teaching one course. Note that, although the instructor works for 40 hours during the week, the time is allocated according to student needs rather than as an eight to five workday. Further, to ensure timely feedback to soldiers, it is necessary for the instructor to check in on the computer on at least a daily basis. Therefore, unlike in residence courses, the SMART instructor must work a flexible schedule, one matching the irregular work hours of the students.

Computer usage as a function of time of day is depicted graphically in Figure 7. Note that the majority of students work at night, whereas the majority of instructor time is in the morning. Much of this time distribution represents the instructor's feedback to the student inquiries of the previous night.

INSTRUCTOR NOTES

Figure 7. Communication Time
Student vs Instructor



SMART INSTRUCTORS

- **Spend less time "teaching" and more time guiding students through the learning experience by:**
  - **directing their studies**
  - **answering questions**
  - **providing performance feedback**
- **Must have a flexible work schedule, matching their schedules to the irregular hours kept by their students**

BEST COPY AVAILABLE

INSTRUCTOR NOTES

CHARACTERISTICS OF THE ADULT LEARNER

The Army trains adults. Although this statement may seem rather simplistic and obvious, it carries with it important ramifications often overlooked by instructional designers and instructors alike. As an instructor of adults, it is important that you understand some of the unique characteristics of the adult learner.

- Adults like to learn from straight forward organized materials, regardless of instructional media.
- Adults need to be able to integrate new ideas with what they already know if they are going to keep, and use, the new information.
- Adults need to spend time on integrating new knowledge with old knowledge. Working on applications to specific back-on-the-job problems helps with this transfer process.

INSTRUCTOR NOTES

- Fast-paced, complex or unusual learning tasks interfere with the learning of the concepts or data they are intended to teach or illustrate.

- The learning environment must be physically and psychologically comfortable.

- Adults tend to take errors personally and are more likely to let them affect their self-esteem. Therefore, they tend to apply tried-and-true solutions and take fewer risks.

- Adults have expectations and it is critical to take time up front to clarify and articulate all expectations before getting into course content.

- Adults bring a great deal of life experience into the classroom, an invaluable asset to be acknowledged, tapped, and used.

- Adult learners tend to be less interested in, and enthralled by, survey courses. They tend to prefer single-concept, single-theory courses that focus heavily on the application of the concept to relevant problems. This tendency apparently increases with age.

INSTRUCTOR NOTES

CHARACTERISTICS OF ADULT LEARNERS

- Adults like to learn from straight forward, organized materials.
- Adults need to integrate new knowledge with old knowledge.
- Adults learn best when the learning environment is physically and psychologically comfortable.
- Adults frequently let errors affect their self-esteem.
- Unrealistic expectations held by adults may interfere with their learning.
- Adults bring a great deal of life experience into the classroom.
- Adults tend to be most interested in practical, relevant, and applied courses.

BEST COPY AVAILABLE

INSTRUCTOR NOTES

GENERAL PRINCIPLES OF LEARNING

The major objective of any Army training course is to develop competent soldiers who can apply their newly acquired knowledge to the tasks, demands, and missions of the Army. As instructors, however, we frequently forget about learning and concentrate on teaching. We must remind ourselves that the real essence of military training is learning, not teaching. Learning results in soldiers actually being able to apply on the job what they have been presented in the classroom. This concept applies to all types of Army courses, including SMART.

DEFINITIONS

Teaching can be defined as communicating information, ideas, techniques, attitudes, and motor skills, whereas **learning** is absorbing these various characteristics and represents an internal, mental process. We can think of learning as a product. It refers to a change in behavior or performance that can be observed and measured.

We can also define learning as the acquisition of knowledge, skills, and attitudes associated with job mastery. Learning can result in a positive change in the performance of a soldier, which will in turn directly benefit the U.S. Army.

Learning is the acquisition of knowledge, skills, and attitudes associated with job mastery.

PRINCIPLES AND CONCEPTS

Some important principles and concepts of the learning process, irrespective of the instructional medium, include:

- All learners are unique individuals and are therefore different. Provision has to be made for differences in ability, aptitude, experience, and learning pace and style. This means that you cannot treat all of your students exactly the same.

- The atmosphere of the instructional group may affect the learning process. People learn best in a friendly, participative

INSTRUCTOR NOTES

environment. By setting a rigid, hostile environment, you may negatively affect the learning process.

- People who interpret a learning task as relevant and worthwhile learn better than people who view the task as irrelevant. Attempts to make learning tasks relevant by directly relating them to actual RC military practice will greatly improve the learning process.

- People learn better when they are actively involved in the learning process. Passive learners commonly waste valuable learning energy in their struggle to pay attention. Attempt to keep your students actively involved in the learning process at all times. Group activities are just one way that this can be accomplished.

- Learning must include practice, rehearsal, and opportunities for application. Make sure that your students have ample opportunities to practice and repeatedly use important course content.

- Learning needs to be reinforced. A simple "Nice Job" can greatly accelerate the learning process.

- Learning should result in usable and applicable knowledge and skills. Realistic and practical exercises should always be chosen over impractical ones.

- Learning is a matter of successive approximations and therefore needs to be guided and shaped. Do not expect your students to grasp the course content the "first time." Learning is a gradual process. Patience is required!

- Learning is purposeful. Establishing class objectives is an important part of the learning process.

- Learning that is understood and not simply memorized to pass the next quiz or test, is less likely to be forgotten. Meaning and relevancy are extremely important to the learning process. Once again, the more relevant and meaningful that you can make the course content, the greater the chance of long-term retention.

- Well organized lessons are easier to learn than poorly organized ones. Make sure that your lessons and exercises are well organized, allowing students to concentrate on the learning task itself instead of wasting

INSTRUCTOR NOTES

valuable time "figuring out" the task.

- Constant feedback and interaction is essential for maximizing various learning experiences. Attempt to interact with All of your students, not just the good or "easy" ones.

INSTRUCTOR NOTES

HIGH RISK STUDENT INDICATORS

It is important to note that on one level, every student in your class is at risk of poor performance, dropout, or both. The challenges of the SMART environment, combined with a full-time job, Army responsibilities, and family obligations can be overwhelming for even the most capable student. Research, however, has determined some characteristics that can help you identify potential performance problems before they become unmanageable. **Before** confronting a student, however, make sure that there really **IS** a problem.

Indicators of problems are:

- **Generally, the lower a person's educational level, the more at risk the student is of dropping out.** It is important to review student records and note those students with a lower level of education or a longer period than average between their last formal education/training and your class. Be prepared to give these students extra encouragement and suggestions on managing their time and improving their study habits to help compensate for any lack of self-confidence or rusty study skills.

- **In general, the first third of the course is the most critical time for students in terms of dropout.** Once this point is passed, students may feel they've invested enough in the course to go ahead and complete it. However, the only time you can safely relax is when the last student completes the last assignment.

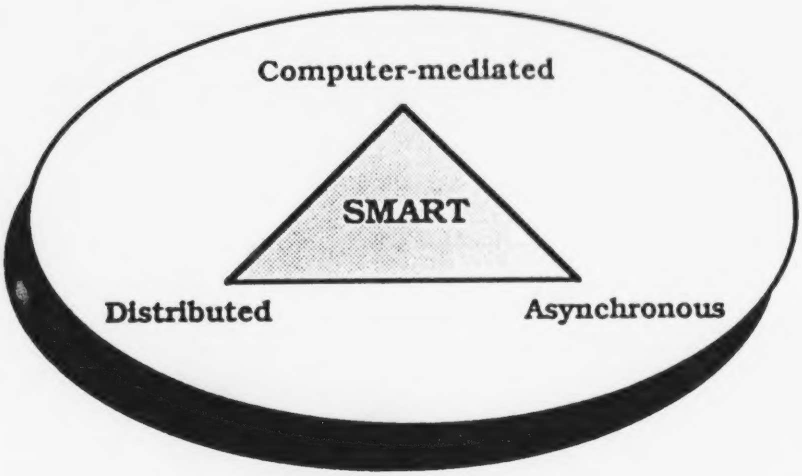
- **Students who lag behind the others in even logging on for the first time may be at risk of not even starting the course.** On the other hand, they could be having major computer problems which could, in turn, make them so discouraged that they will not even attempt the course. Make sure these students receive prompt personal support and technical troubleshooting assistance.

- **Students who lag behind the others in submitting their first assignment are also at risk.** Contact these students online or by telephone in an effort to get them "up to speed."

INSTRUCTOR NOTES

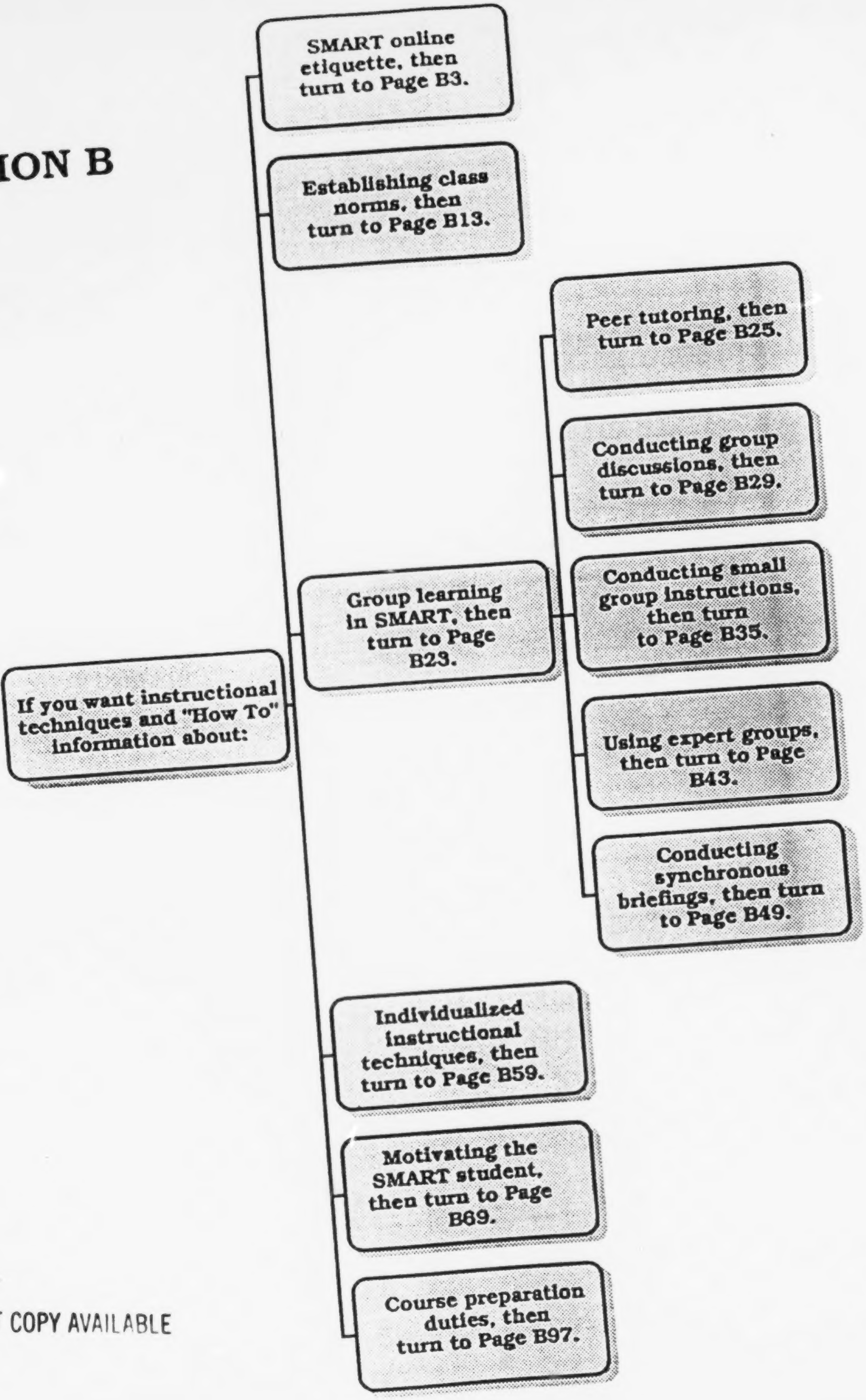
HIGH RISK STUDENT INDICATORS

- Lower education levels.
- Being slow to initially log on.
- Turning in the first assignment late.
- Problems in the first third of the course.


Computer-mediated
SMART
Distributed
Asynchronous

BEST COPY AVAILABLE

SECTION B



- If you want instructional techniques and "How To" information about:
  - SMART online etiquette, then turn to Page B3.
  - Establishing class norms, then turn to Page B13.
  - Group learning in SMART, then turn to Page B23.
    - Peer tutoring, then turn to Page B25.
    - Conducting group discussions, then turn to Page B29.
    - Conducting small group instructions, then turn to Page B35.
    - Using expert groups, then turn to Page B43.
    - Conducting synchronous briefings, then turn to Page B49.
  - Individualized instructional techniques, then turn to Page B59.
  - Motivating the SMART student, then turn to Page B69.
  - Course preparation duties, then turn to Page B97.

BEST COPY AVAILABLE

INSTRUCTOR NOTES

SMART ETIQUETTE: Basic features of online communication

The suggested norms of courtesy, which guide every aspect of communication in SMART, will be discussed under the heading of online etiquette. SMART etiquette is extremely important, and potentially troublesome to instructors, course administrators, and course participants. But why? Most people are not only new to the SMART technology, but are also unaccustomed to communicating almost exclusively in writing. Visual cues, such as frowns and looks of confusion or boredom, which help guide our behavior in face-to-face encounters in residence courses, are absent in computer mediated communication.

A list of norms will be helpful to all participants in a SMART class. It is particularly important for all instructors and other team members to familiarize themselves with these guidelines so that they can help educate SMART students.

CAUTION: The list of norms and expectations is not a complete list, because it is impossible to predict all of the problems which could arise during a SMART course. Use your own good judgment and local guidelines to help you in specific situations.

NORM 1: PROMPTNESS IN RESPONDING TO OTHERS IS EVEN MORE IMPORTANT IN SMART THAN IN OTHER FORMS OF INTERACTION.

WHY? It is very possible that your students will have had no prior contact with either you, as the instructor, or with any other students in the class. Hence, almost all they know of you and each other are the written words which appear on the screen. As a result, those words are like a lifeline which connects all members of the class. Unnecessary delays in responding can make people feel very isolated or frustrated, which can negatively impact their work.

Are there times when delays in communication are unavoidable? Of course. The very fact that most of the communications are asynchronous means that people will usually be online at different times. And the fact

INSTRUCTOR NOTES

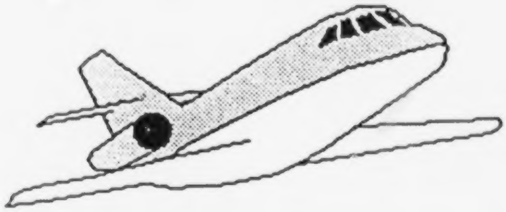
that students and instructors will typically have full-time jobs and families as well as their Army jobs means that their SMART work will be sandwiched in between other obligations. While this flexibility is a strength, it can cause delays in communication.

How can I help my students understand the importance of prompt feedback in responding?

- One important way is to set a good example yourself. ALWAYS respond to messages sent to you as soon as possible. Failure to respond to messages is like avoiding being present in the office during normal work hours, or worse, like walking right by a student who is trying to ask you a question.

- Learning to communicate online will require adjustments from everyone. Realize, however, that some students will have more difficulty making those adjustments than others. Counsel the class as a whole about the virtues of being patient, but be prepared to identify people who seem to be having more serious problems and contact them directly. Communication in SMART takes longer than in face-to-face encounters, so what would be considered an unreasonable delay in the latter can be the norm in SMART.

- Make an announcement that any individual who will be offline for more than a few days should notify the members of the class. It is frustrating to send message after message to someone only to find out the person was on vacation or a business trip. The computer cannot automatically tell that someone is on vacation, so courtesy and class discipline require that students notify each other and the instructor of prolonged absences.



NORM 2. IT IS IMPORTANT TO KEEP ALL COMMUNICATION SHORT AND RELEVANT.

WHY? Because of the wealth of written information, it is possible for everyone to feel overloaded by the amount of online material that they have to read. In addition, long rambling messages can make people lose interest and turn off the class. This situation is not unlike the case of

INSTRUCTOR NOTES

a face-to-face discussion which loses itself in tangents.

Recommendations: Encourage everyone to keep all responses short and to the point. Individual messages should be no longer than 25 lines. If more than two or three points are to be made, put them up as different messages at different times. Besides making it easier for people to read the information, it also rewards people for logging on.

Messages should be no longer than 25 lines.

NORM 3. IT IS IMPORTANT TO TRY AND KEEP ALL COMMUNICATIONS COURTEOUS AND POSITIVE .

WHY? Most of us give and receive non-verbal compliments. Such compliments include nodding our head, smiling, and maintaining eye contact. These non-verbal compliments are given without even thinking about them most of the time. However, because these forms of communication are impossible in SMART, it is critical to consciously remember to give this kind of feedback in written form.

Recommendations: Online compliments must be more direct than required in face-to-face interactions because features like tone of voice or looks are not available to help convey your intentions. It is also important to be sincere in your praise. As in other aspects of etiquette, you must be responsible for teaching your students how to share compliments in public and private communications. Setting a good example yourself is one way of accomplishing this task.

NORM 4. IT IS IMPORTANT TO CLEARLY COMMUNICATE YOUR THOUGHTS AND FEELINGS.

WHY? Clarity is a virtue in communicating thoughts both in SMART and in face-to-face encounters. However, clarity of expression is particularly important in SMART because of the absence of so many cues which guide our social interactions. For example, a joke in a face-to-face setting could be offensive without an accompanying smile. Therefore, students must compose their messages and responses carefully to ensure that the intent of their words is communicated.

INSTRUCTOR NOTES

CAUTION: If a message of questionable meaning is received, it is VERY important to contact the person for clarification. Don't get offended first and ask questions later!

NORM 5. CLARITY OF EXPRESSION REQUIRES NEITHER PERFECT GRAMMAR NOR PERFECT TYPING.

WHY? Few students in a SMART class are likely to be professional writers or typists. If you require them to put perfect documents online, they may not write anything at all. Conversely, it is important that they learn to be effective communicators. As an instructor, it is your responsibility to determine what constitutes effective writing and to counsel those whose contributions fail to meet class standards.

CAUTIONS: There are two exceptions to this norm.

- All items that YOU put up for discussion should be well written and free of typographical errors.
- Formal papers, such as homework papers or essays, should also be well written.

NORM 6. STUDENTS SHOULD AVOID WRITING ONLY IN UPPER CASE LETTERS.

WHY? THERE IS A TENDENCY FOR SOME STUDENTS TO PREFER TO WRITE IN ALL UPPER CASE LETTERS. This technique should be discouraged for two important reasons.

- First, although the sender may think that it is much easier to type in upper case letters, it is often more difficult for the receiver to read. Ease of reading should take precedence over ease of typing.
- Second, by using all upper case letters, it is much more difficult to communicate emotions. It is better to use upper case letters sparingly, and only for making a strong point or conveying some type of emotion. For example, the following transmission from a Colonel to a Lieutenant has two different meanings when typed in all upper case letters as opposed to mostly lower case ones:

> - WELL LIEUTENANT, I'M GLAD TO SEE THAT YOU ARE FINALLY READY TO PROCEED.

INSTRUCTOR NOTES

- Well LIEUTENANT, I'm glad to see that you are FINALLY ready to proceed!!

SMART ETIQUETTE

- **Try to be as prompt in responding as possible.**
- **Keep communication short and relevant.**
- **Try to keep all communications courteous and positive.**
- **Clearly communicate thoughts and feelings.**
- **Clarity of expression does not require either perfect grammar or perfect typing.**
- **Routinely typing in all upper case letters should be discouraged.**

INSTRUCTOR NOTES

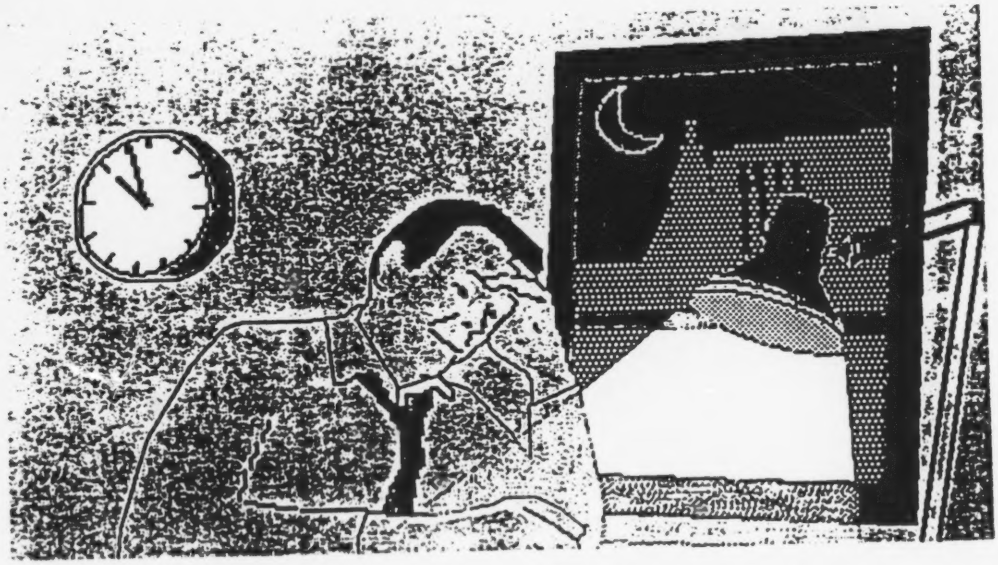
ESTABLISHING CLASS NORMS

As in correspondence or resident courses, SMART courses run best if certain class norms are adhered to by all participants. Norms are standards for conduct . Because of the unique nature of the SMART environment, some norms have to be established in addition to those found in resident courses.

It is possible to establish norms in a SMART course in two different ways. First, you the instructor, can establish class norms. A second way is to share this responsibility with your students. The value of this latter approach is that it can help encourage a sense of ownership of the course, which can, in turn, increase motivation and the sense of involvement.

Whether you or the students establish norms, some guidelines are:

NORM 1: STUDENTS ARE EXPECTED TO STUDY AT LEAST A MINIMUM NUMBER OF HOURS PER WEEK.



BEST COPY AVAILABLE

INSTRUCTOR NOTES

WHY? Unlike resident students, those in SMART classes are only part-time students. This means that their course work competes for time and energy required for their full-time job, their RC duties, and their family life. Because part-time students have so many competing obligations, you are helping individuals structure their time and priorities by establishing a minimum workload per week.

What is the minimum number of hours a week students can be expected to work on a SMART course?

Eight hours a week , including administrative time, is a reasonable figure. To expect more can result in burn-out, while a slower pace will needlessly prolong the course.

NORM 2: REQUIRE STUDENTS TO SIGN-ON A SPECIFIED NUMBER OF TIMES PER WEEK. "Sign-on" means that a student logs on to the computer and records all new information. It is like attendance in a resident class.

WHY? Because of the asynchronous interaction in SMART, communication takes place over a period of days, even weeks. If students only sign-on once or twice a month, they cannot be effective participants in the class.

How many sign-ons should be required?

It is difficult to estimate an appropriate number of sign-ons, because the type of course is an important consideration. For example, a class that uses discussion or group work will require more sign-ons than one that makes extensive use of CAIs.

How do I tell if I am requiring the right number of sign-ons?

Various activity measures can be used, such as completing tests and other activities on assigned due dates, timely responses to discussions, and active participation in required group projects. Failures in these areas argue for increasing the number of sign-ons.

NORM 3: STUDENTS SHOULD BE REQUIRED TO MAKE A MINIMUM NUMBER OF ONLINE RESPONSES IN A GIVEN TIME PERIOD.

WHY? In a resident course, an instructor can take attendance and judge attentiveness by facial expressions. However, in a computer classroom, it is impossible to know

INSTRUCTOR NOTES

whether a student understands the discussion or is even reading the discussion comments unless the student makes some contribution.

What issues do I consider in determining a reasonable number of required responses?

- By requiring a certain number of online responses, you may force the student to sacrifice quality for quantity. Establishing a minimum number of responses can result in meaningless trivia.

- Students are often reluctant to make written comments and may resist your attempts to force them to do so.

WHY?

  - Some are uncomfortable with their writing ability.

  - Some are threatened by the existence of a permanent transcript of course proceedings. While an embarrassing comment made in a face-to-face classroom will eventually be forgotten, SMART preserves a complete record of all online comments.

  - A few will want to do the least amount of work possible.

- If you don't set a minimum requirement, rate of participation may be very low.

Is there a suggested number of minimum responses per week?

While there are risks in requiring a certain rate of response, it may be more risky not to do so. In addition, it is usually better to establish the number at the beginning rather than wait until a problem develops. Therefore, you may consider requiring 3 responses per week.

NORM 4. STUDENTS SHOULD BE REQUIRED TO ANSWER COURSE-RELATED QUESTIONS DURING ANY ONLINE DISCUSSION.

WHY? There are two reasons. First, it is possible to diagnose an area of weakness or confusion by the types of answers provided. Second, a good or different answer can foster group discussion, encouraging students to look at the material from different perspectives.

INSTRUCTOR NOTES

SOME SMART NORMS

- **Students are expected to study a minimum number of hours per week.**
- **Students are required to sign-on a specified number of times per week.**
- **Students should be required to make a minimum number of online responses in a given time period.**
- **Students should be required to answer technical questions.**

Student Development of Norms

To maintain a certain level of academic quality, some norms should be maintained at a minimum level. As long as this minimum standard is maintained, allowing students to set the guidelines can increase commitment to the class. The following steps can be taken to facilitate this process.

Step 1. Students should have received training on how to interact in a SMART group discussion and be familiar with the software prior to discussing norms .

Step 2. Depending upon the class size, try to assign students into groups of six or seven members. The norms developed by the groups will later be merged to form a set of class norms.

Step 3. One student per group should be assigned the role of discussion leader. Criteria for selection should include software/computer skills, online activity, and any demonstration of leadership or personal initiative.

Step 4. A separate team room should be assigned to each group to facilitate work on the project.

INSTRUCTOR NOTES

Step 5. The instructor should present a set of general topics for consideration in establishing norms.

Step 6. The groups should have 1-2 weeks to generate their list of proposed norms. Unless they are having problems, allow their deliberations to proceed without interfering.

Step 7. Once the groups have developed a set of norms, they should be merged and adopted by the whole class. If, as the instructor, you see a need for additional norms (such as the four summarized on page B19), then you will need to add these as well. You may also need to reconcile differences in the norms developed among groups. Once norms have been established, it is important to review them periodically to see if they are actually working. If not, new norms may be needed and/or old ones modified.

INSTRUCTOR NOTES

GROUP LEARNING IN SMART

Students in residence have the opportunity for group interaction and support. Conversely, correspondence students normally have little contact with each other. This imposed isolation frequently can have a negative impact on performance and completion in correspondence courses. Like resident courses, SMART enables students to interact in various ways from formal small group exercises to learning partnerships, to the informal sharing and support which might occur in the break room. Group interaction is a very important feature of SMART, because it can increase learning as well as help to decrease dropout.

Group learning activities that can be conducted in SMART include:

- **Peer teaching**
- **Group discussions**
- **Small group exercises**
- **Expert groups**
- **Synchronous briefings**

It is important for you to become familiar with each of these instructional techniques.

INSTRUCTOR NOTES

PEER TUTORING

Peer tutoring involves using students to coach or teach other students. There are several advantages of using peer tutoring in a SMART classroom. First, this type of interaction can be highly motivating to both the tutor and the learner. Second, adults often prefer to learn from each other, rather than from a formally designated instructor. Third, this technique allows you to take advantage of the full range of expertise which may exist among your students.

There are at least two different types of peer tutoring that may be utilized in the SMART environment. One type involves assigning individual tutors as the need arises. The second type assigns learning partners at the beginning of class.

TYPE 1: Assign individual tutors as the need arises. To implement this type of tutoring system, use the following guidelines:

- In the first part of the course, most students will be more likely to have problems with the computer than with the course content. As a result, choose tutors who have demonstrated competence using the computer system. Conversely, as the course progresses and all students become more proficient, you should choose tutors based upon their knowledge of a specific content area.

- Use volunteers whenever possible.

- Introduce the tutor and peer online.

- Give them their own private conference to encourage an open exchange. If the communi- cations software does not permit this, instruct them in the use of private messaging.

- Monitor their progress by observing their online communication. After a couple of weeks, telephone each of them and discuss their progress and any special problems.

- When the peer has reached the desired level of proficiency, the tutor is free to return to a normal

BEST COPY AVAILABLE

INSTRUCTOR NOTES

workload. Make sure that the tutor receives recognition for both the demonstrated competence and the additional time commitment. If possible, extra points may also be awarded to the tutor.

TYPE 2: Assign partners at the beginning of class. In this instance, the participants are more like learning partners than a typical tutor-peer relationship. Use the following guidelines:

- Use logical criteria in assigning partners. Criteria may be based on computer experience, technical experience, or rank. Pairs can be configured in a number of different ways. For example, a highly experienced individual may be paired with someone of much lesser experience. Conversely, two students of similar backgrounds may be paired. The overriding selection criteria should be to find two individuals who can work effectively together. Since they do not initially know each other, pairings simply may not work out. It may be that learning partners will have to be reassigned during the course.

- List the responsibilities of each partner in writing. Examples may include: assisting each other in technical material, providing encouragement/support to help each other pass all examinations, etc.

- Monitor the online dialogue of the learning partners. If a pair is in trouble and counseling does not work, consider reassigning the members.

TYPES OF PEER TUTORING

- **Individuals assigned on a needs basis.**
- **Learning partners assigned at the beginning of class.**

INSTRUCTOR NOTES

CONDUCTING GROUP DISCUSSIONS

Group discussions involve the exchange of information, ideas, thoughts, questions, and answers among three or more individuals. There are four topics that you should become familiar with regarding group discussions. These include:

- **Developing discussion questions**
- **Facilitating the discussion process**
- **Positively reinforcing group discussions**
- **Troubleshooting problems**

HOW TO DEVELOP DISCUSSION QUESTIONS

Step 1. Evaluate the course materials for potential topics. Pay particular attention to questions that have many possible answers or to topics that are controversial. Also, make note of and possibly use questions posed by your students.

Step 2. Develop the questions using the following guidelines:

- Write an imaginary or real scenario of 20-40 lines which ends with a question with many possible answers.
- Have someone else read the developed material. Does it make sense and is the question easily understood?

FACILITATING THE DISCUSSION

- Send each student a message requesting participation in the discussion.
- Continue posing questions and responses as necessary to keep the students' interest. However, do not add SO many responses that no one else has anything to contribute.
- As the discussion progresses, ask each student by name to respond to a specific comment.

BEST COPY AVAILABLE

INSTRUCTOR NOTES

- For longer discussions, summarize previous responses. This helps to avoid losing valuable insights as well as to help keep the discussion focused. For extended discussions, a good rule of thumb is to summarize after 30-40 responses or every 2-3 weeks.

- Another way to focus the discussion is to remove responses that do not contribute to the topic. Two methods have proven effective for doing this:

    - Make the response a new item for a separate discussion.

    - Remove the response from the system.

CAUTION: Contact the author of the response to clarify the reasons for your actions.

- Have a "plant" (i.e. an assistant in the audience) who enters controversial statements that you have previously written. The person acting as a plant could be a former or current instructor acting as a student. Whenever the pace of conversation lags, the assistant enters another comment.

POSITIVELY REINFORCING GROUP DISCUSSIONS

Compliments should always be made in public. A student's questions, responses, or comments should always be recognized. The following techniques can be used as guidelines.

Make follow-up comments which will make students feel their contributions were valuable.

> EXAMPLES: "Elaine, I agree with you on that point. It is very important for an officer to set a good example."
>
> "John, that is a very good point. I had never thought of that before."

Encourage students to compliment each other. One means is to direct a question from the first student to another, who is specified by name.

> EXAMPLE: "Joe, that is a good comment. Peter, what do you think about ways for an officer to gain respect? Do you think

INSTRUCTOR NOTES

that we have to be an example? George, what are your thoughts on this subject?"

TROUBLESHOOTING

If the discussion is not working, look closely at the transcript to determine the problem. Ask the following questions:

- Is the question of interest to the students? If not, are there ways to improve the question?
- Is the question presented in such a way that students are naturally drawn in? Remember, they already have a number of competing demands, both within and outside the course.
- Is the question too narrow in scope to sustain an extended discussion?
- Have all reasonable responses already been entered?
- Do the students' comments indicate that they do not understand the question?
- Are there external factors that require more time than expected? For instance, are course materials more difficult than usual.
- Are your expectations simply too high?

CAUTIONS

- **Do not try to get too much mileage out of a discussion question.**
- **If the discussion is finished, move on to the next topic. Don't discuss simply for the sake of discussing.**
- **In general, it is better to have many short discussions than to prolong one that has been exhausted.**

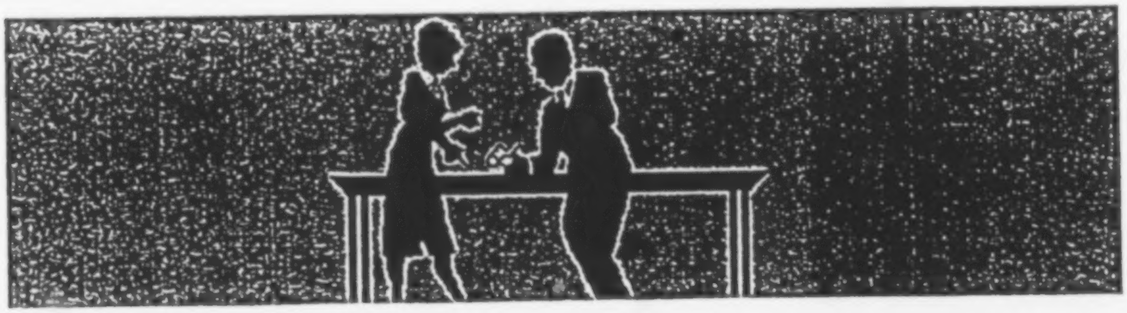
INSTRUCTOR NOTES

CONDUCTING SMALL GROUP INSTRUCTION (SGI)

Small Group Instruction (SGI) involves two or more students working together to solve an assigned problem. In resident training, the SGI model uses an Officer in Charge (OIC) or Non-Commissioned Officer in Charge (NOIC) to administer and oversee the small group learning activities. Groups of 8 to 16 members are taught, coached, evaluated, and led by Team Leaders, who should have sufficient relative rank and content specific learning to do the job. In SGI portions of the Program of Instruction (POI), the team leaders are assigned much of the teaching. At other times, their assigned roles are to encourage, motivate, counsel, and coach their team members through the lessons and other academic activities.

SMART is perhaps the only technology which enables distance students to participate in this important learning opportunity. As a result of this capability, SMART makes it possible for geographically distributed students to enjoy the same educational benefits of SGI as resident students.

Many of the same principles of SGI apply in both SMART and in residence. However, there are ways in which SGI in the SMART environment is different from resident training. These major differences are briefly summarized in the following table:



BEST COPY AVAILABLE

INSTRUCTOR NOTES

SGI CONSIDERATIONS IN SMART

- In assigning members to groups, both content skill levels and computer skill levels must be considered.
- Students will need at least 2 weeks familiarize to themselves with the software prior to the start of group projects.
- Learning effective leadership techniques in SMART requires a different process than in Resident courses.
- Motivational techniques in the SMART environment are somewhat different than in Resident courses.
- Most military leaders are used to an immediate response and therefore, may have trouble accommodating to time lags in SMART.

IMPLEMENTING SMALL GROUP EXERCISES

The effective use of SGI in an online environment requires hard work, imagination, and innovation. The following suggestions are offered as general guidelines.

- Provide each group with a separate network to allow the group to work privately, as well as to prevent the mixing of their items with the items and responses of the main transcript.

- Monitor the online comments of the student team leaders for signs of excessive stress. Use the telephone and computer to provide encouragement and support.

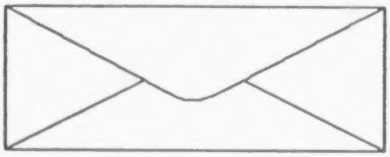
- Provide guidelines for the student team leaders and be prepared to step in if the group is not functioning properly. It may also be a good idea to allow team leaders an opportunity to practice their assigned roles in a nongraded assignment.

- Suggest that student team leaders may want to occasionally use synchronous meetings. In such instances, the group leader makes arrangements for all group members to be online at the same time. The project can be discussed, assignments given, and time lines established. Students are then free to work on

BEST COPY AVAILABLE

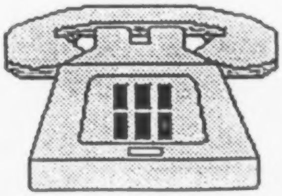
INSTRUCTOR NOTES

their individual assignments at their own pace. Although communication costs for synchronous meetings are high, this procedure is an excellent way to get the groups off to a good start. Also, suggest to student leaders that they may want to use the U.S. mail service. Although mail service is slower than communications via SMART, there are at least two occasions where the time lag is justified. These are:



- When a large amount of information can be sent cheaply and easily via the postal service.
- When the material is more complex (such as maps) than what can be easily communicated online.

● Telephone communication can be an effective means of eliminating misunderstandings as well as motivating group members.



- Provide each student leader with a credit card for use ONLY in calling group members. Emphasize that the leader is accountable for all calls and that excessive use of the telephone may result in a lower grade , forfeiture of the calling card, or some other form of action.

GRADING SGI IN SMART

As with many other features of SMART, there are important differences in instructional procedures from those available in residence. This is particularly true in SGI and the grading process. These major differences include:

●

Residence: The student is usually graded on a written assignment and/or an oral presentation .

SMART: The oral presentation is actually a written presentation although it can be delivered synchronously. If this procedure is followed, the official being briefed can ask questions and expect an immediate reply. The written requirements (eg., an operations order) can be submitted by mail.

INSTRUCTOR NOTES

●

Residence: In many instances, time is used as a criterion in testing.

SMART: The asynchronous nature of SMART slows the interaction and removes time as a testing criterion.

●

Residence: Typically, no permanent record of the group interaction is available.

SMART: One of the most unique features of the SMART technology is the presence of a permanent transcript. The transcript can help you grade leadership and organizational skills of the team leaders as well as the quality/quantity of each group member. The importance of a permanent record in judging SGI cannot be overstated. The following comments from an officer briefed during a group exercise illustrate this point:

"In retrospect, had the first team gone after the second team they would have made a much better impression. As I looked through the responses during the first team's briefing, I realized how much better prepared they were than the second team."

Upon review of the transcripts, the officer decided that one group (Team 2) actually did a much better job than he had originally thought. This "second chance" review is a valuable feature of the SMART system.

INSTRUCTOR NOTES

USING EXPERT GROUPS

One part of the Small Group Instructional model includes required participation in the leadership of a team. An expert group is a team of between four and ten students assigned to perform some of the instructor's responsibilities. An expert group can be responsible for developing and facilitating group discussions, developing technical questions, and tutoring. The following steps will be helpful in implementing an expert group.

STEP 1. Develop a list of responsibilities for each group. Some suggestions include:

- Answering technical questions within 24 hours.
- Providing tutorial assistance to those experiencing problems.
- Developing discussion questions for the group.
- Facilitating group discussion by adding responses and items.
- Helping the instructor motivate other members of the class.
- Developing pre-exam reviews.
- Assigning a formal paper describing practical experience in a topic area.

STEP 2. At the beginning of the class, assign 4-10 students , based on their entering level of expertise, to cover different topics.

STEP 3. Based on the assignments made in Step #2, develop assignment standards. Examples would be to require group members to answer questions within 24 hours or to require each team member to contribute one response to a group discussion.

STEP 4. Organize a separate net for the use of each expert group.

STEP 5. Provide each group with a schedule for assignment completion.

INSTRUCTOR NOTES

STEP 6. Monitor the activities of the group to ensure they have developed a plan and are implementing it effectively.

STEP 7. Students should be informed that their participation in the expert groups will be graded. Quality participation requires considerable time and students may need this grading incentive to perform well.

ADVANTAGES AND DISADVANTAGES OF USING EXPERT GROUPS

The following tables summarize some of the important advantages and disadvantages of using expert groups.

ADVANTAGES OF SMART EXPERT GROUPS

- Group members can acquire a greater sense of ownership as a result of participation.
- Participation can result in increased learning.
- Students acquire additional leadership training, especially in the challenging environment of SMART where face-to-face interactions are not typical.
- Students frequently develop a sense of empathy for the challenges facing the SMART instructor. This commonly leads to increased support for the instructor.
- Students in expert groups assume some instructor responsibilities, thereby reducing the stress and workload of the instructor.

ST COPY AVAILABLE

INSTRUCTOR NOTES

DISADVANTAGES OF SMART EXPERT GROUPS

- Training time is increased because of the time lags involved in group work.
- Group work increases communication costs.
- If group members do not prioritize their responsibilities, the quality of their contribution will diminish.
- If members do not participate, group leaders may become frustrated, commiting less time to the activity.
- If members do not participate, valuable learning experiences may be lost, both for the expert group and the class as a whole.

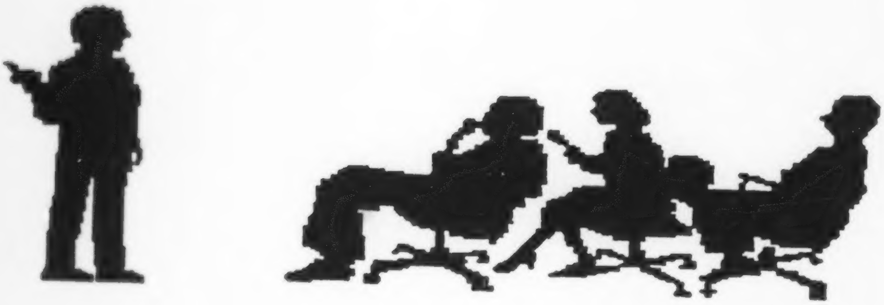
BEST COPY AVAILABLE

INSTRUCTOR NOTES

CONDUCTING SYNCHRONOUS BRIEFINGS

Oral briefings represent an important and frequently vital way of exchanging information. In resident schools, a briefing to a senior officer or NCO might conclude a major group project. In many instances, briefings can turn into a demanding and somewhat stressful activity, depending on the disposition of the senior official being briefed and the group's preparedness.

Since SMART is a remote communications medium, how realistically can the medium simulate an actual briefing? By having everyone logon at the same time (synchronously), such briefings can accurately duplicate the intensity and stress of a face-to-face briefing. As an example, here are some comments from an actual online, synchronous briefing that represented a culminating exercise for an Engineer Officer Advanced Course module.



INSTRUCTOR NOTES

Online comments from the Colonel being briefed:

"Lt. XXXX, is this your first briefing? You have provided me with no outline. I want this broken down to include: enemy forces, friendly forces, weather, terrain, and assumptions as it bears on your mission. Provide this NOW."

"I have seen nothing so far this evening about project security! This pipeline project is one I'm concerned about. What measures are you taking to protect this project?"

"Lt. XXXX, I don't want you to parrot or recite back what I have read. I want you to tell me how this information impinges on your projects!"

"You're guessing Capt. XXX. Troops have to cross this bridge and I want a timeline. If you can't get this yourself, then ask somebody. Isn't there any coordination on this team?"

"Lt. XXXX, you have gotten off to a poor start! You are the XO and you are responsible for organizing this briefing. I now want you to proceed to the presentation and analysis of your courses of action and your recommendation. Let's get this wrapped up!!"

"I am terminating this briefing because you are unprepared. You are all obviously competent individuals and have done some good work both in preparation for this briefing and on the fly tonight. What is also obvious is that you have failed to work as a team in preparation for this event."

Online comments from a very unhappy XO who was in charge of a briefing:

" Sir, I have let this team down drastically for my lack of knowledge in the hows and whys in presenting a briefing to a group commander. Should we work on all 5 projects at the same time or do one then the other? I'm really at a loss on this."

Online comments from a team member following a briefing:

"I don't know about the rest of you guys, but for some reason my butt feels a bit sore after this briefing. How 'bout ya'll?"

From these comments, it appears that synchronous briefings in the

INSTRUCTOR NOTES

SMART environment can be very realistic and rather trying for the briefing team. The following guidelines are suggested for conducting a briefing.

Setting up the briefing.

- There should be a minimum of two individuals to receive the briefing, a senior official and the staff team leader.

The Game Plan

- Once the briefing team is established, they should set the "tone" for the briefing. The tone can range from a relaxed , informal style to a very demanding, formal one. For formal briefings, let student performance dictate the intensity of the briefing. In practice sessions for the final briefing, the same "emotional" tone as that expected in the final briefing should be set.

- The individuals being briefed should be in the same room or at least in touch with each other by telephone and/or computer.

- On the day of the briefing , the team leader should check to determine all participants have enough money in their computer accounts. The week before the briefing, the team leader should check with the computer center to make sure that the computer will not be down for scheduled maintenance during the briefing interval. The team leader should also check to ensure that all participants have enough paper for their printers.

- A briefing rehearsal should be conducted by those individuals who will receive the briefing to assure the system is working well.

- The staff team leader should be online at least one half hour before the briefing is to begin to check for any administrative or other problems.

BEST COPY AVAILABLE

INSTRUCTOR NOTES

Methods for presenting a formal briefing.

- Divide the briefing into five or more sections.

- Have one student put the first section online.

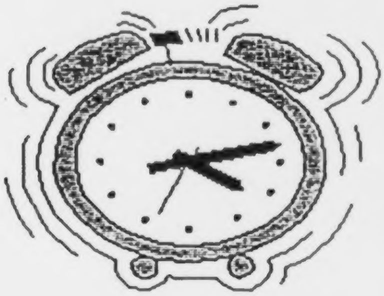
- Have the individual(s) receiving the presentation read and study the first online presentation.

- Find at least one question to ask the first presenter and place it online. At the same time, ask the next presenter for his/her section.

- If the response from the first person questioned is correct, allow that person to continue. However, if the response is incorrect, ask another question.

- Continue this process until the amount of information coming back from the presenters is too much for the receiver(s) to assimilate. Depending on the nature of the material and the experience of the receiving staff, approximately 3 sections seems to be a realistic limit for adequate assimilation.

- Continue this process until the briefing is complete or the time limit has been reached. Suggested time limits should be between 2 and 4 hours, with 4 hours an absolute maximum.



- If the briefing requires significant improvement, the soldiers can be asked to present the briefing a second time, or discuss the reasons for the poor performance online.

Other important information

- ▲ To reduce costs, it is suggested that briefings be held on weekends.

- ▲ Students should be told to stay online throughout the briefing. Signing on and off the system can be more expensive during a synchronous briefing than simply staying online throughout its duration.

INSTRUCTOR NOTES

▲ Students should be provided an opportunity to practice a briefing before being required to participate in a formal one.

▲ Students should be informed of the expected mood of the officer(s) to be briefed.

▲ One problem with the SMART environment is that it may be very difficult to transmit graphics online, depending on your software. To circumvent this restriction, the instructor or team leader should require that briefing charts be sent by mail or FAX **before** the briefing begins.

▲ One of the unique features of SMART is that students can work on answers and communicate back and forth without being observed. The individuals being briefed must determine how much of such "backstage" discussions will be allowed. Each briefing team could be given a separate net to discuss questions and generate answers. If greater control is desired, team members could be given a fixed time limit to respond (for example, 5 minutes).

▲ Although it may be tempting to substitute someone else for the briefing official, it is important that the "genuine article" be used.

▲ Give each team an advance sheet, showing the grading breakdown for each portion of the group exercise, including the briefing. This allows the student to understand the importance of the briefing process.

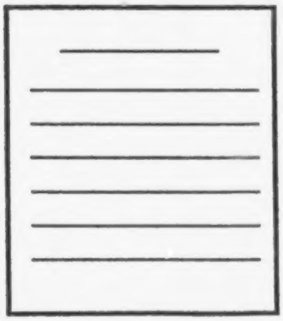
INSTRUCTOR NOTES

IMPLEMENTING INDIVIDUALIZED INSTRUCTIONAL TECHNIQUES

Instructional techniques involving individual learning (as opposed to group learning) can be highly varied in the SMART environment. In some instances, implementing such instructional methods is very similar to that of residence courses. In other instances, however, there are significant differences. These differences will be summarized for the following individual instructional techniques:

- **Writing Papers**
- **Reading/Independent Study**
- **Quizzes**
- **Progress Tests**
- **Guest Speakers**
- **Individual Tutoring By The Instructor**

WRITING PAPERS



Differences:

In a SMART classroom, all students have access to word processing, which can facilitate both the process of writing as well as the quality. In residence, word processing programs are normally not available.

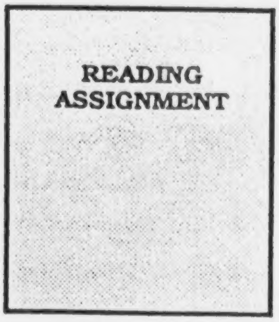
Recommendations for implementation:

- Prior to assigning a paper, make sure everyone has access to the necessary library materials or arrange to provide the required material by mail. While this is not a consideration for resident students, the distributed nature of RC soldiers makes this an important issue.

- Because long papers are difficult and costly to send over the computer, ask students to mail them to you.

INSTRUCTOR NOTES

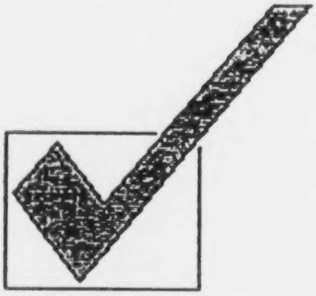
READING/INDEPENDENT STUDY



Differences:

Virtually no differences exist between SMART and resident courses.

QUIZZES



Differences:

Looks of confusion, misunderstanding, and inattentiveness that are so easy to observe in a resident course are impossible to view in the SMART environment. Lacking these visual cues, it is important for the SMART instructor to receive some type of input regarding the level of student comprehension. Quizzes are an excellent source of information concerning how well everyone is comprehending the material.

Recommendations for implementation:

- Depending upon the course content, quizzes should consist of 4-5 multiple choice questions or one long, numerical problem-solving question. Remember, multiple choice questions are easy to write and grade on a computer.

- Students will be motivated to perform well if the quizzes are either prerequisites or "gates" that must be passed before accessing other activities, or are a component in the final course grade.

INSTRUCTOR NOTES

PROGRESS TESTS

Differences:

In a resident course, progress tests are given regularly, such as every few days. However, it may take a SMART class as much as one month to cover the same amount of material. As a result of this time lag, giving a test only every month constitutes an unreasonable delay.

Recommendations for implementation:

- Give tests frequently, typically after each logical unit of instruction. Although the testing interval will probably be predetermined by the course developer, you, the instructor, must monitor this proposed interval and determine if it is adequate. If the testing interval is unacceptable, adjustments may be necessary.
- It is important to monitor online conversations to ensure that those who have completed the test are not sharing answers with others.

GUEST SPEAKERS

Differences:

In resident courses, guest speakers must frequently travel great distances at considerable expense to make their presentations. One advantage of computer conferencing is that it is possible to have an expert from anywhere in the world participate in the class without incurring the cost of travel. However, this advantage presupposes that the expert is trained in computer conferencing and has access to the proper hardware and software configurations.

INSTRUCTOR NOTES

Recommendations for implementation:

- Query the students for areas of interest.

- If possible, locate an expert who could expand on these areas of interest and is willing to participate in such an effort. Make sure that you explain to the expert the length of time that he/she will be involved. Experts may be located through personal contacts, referrals from other instructors, or identifying authors of relevant publications and using either them or their contacts.

- Ask the guest expert to write an article of not more than 50 lines on the discussion topic. The article should be written in a manner which will stimulate discussion.

- Give the students 2-3 weeks to read the article and put their questions and responses online.

- After this time period, have the expert answer questions online. This process may be repeated until all questions and responses have been placed online.

- If the expert lacks a computer or computer skills, the instructor can do the computer work while the expert provides the technical content.

INDIVIDUAL TUTORING BY THE INSTRUCTOR

In a large class discussing a difficult subject, it may be impossible to offer individual tutoring to each student. In the SMART environment, however, it is possible to provide individualized, quality instruction without undue workload.

Recommendations for implementation:

- It is not uncommon for more than one student in a class to have the same question. This observation can be used to your advantage.
    - Write your answer in such a way that it can be sent as a message to everyone in the class.

INSTRUCTOR NOTES

or

- ■ Put the answer up as a public item without revealing the name of the individual who asked the question.

- ● Encourage students to ask their questions in public, rather than sending them as private messages. Besides showing them that others have the same question, this technique also directs everyone's attention to this information.

INSTRUCTOR NOTES

MOTIVATING SMART STUDENTS

While motivation is an important element in a student's completion of training in either residence or SMART, it assumes greater importance in remote delivery of training. In many distance education courses, dropout rates of 50% are common. Few figures are available for dropout rates in distance courses using computer conferencing, although dropout rates of 20% or more have been reported in classes which were voluntarily undertaken by students.

Why are dropout rates so high for soldiers who study at a distance? In the first place, resident students are full-time soldiers who live in a school environment, freer from the commitments of job, family, etc. which come from studying at home. In contrast, SMART students typically study amid the various distractions characteristic of "tabletop training" (such as children playing, loud televisions and stereos, and distracting phone calls) while holding down a full-time job.

Second, because of their full-time status at an Army school, resident students are subject to various forms of accountability which are absent in the home atmosphere of a part-time soldier. For example, a soldier who is not present for a resident course may be considered AWOL unless he or she can provide an adequate excuse. A soldier studying in SMART, however, can "skip class" simply by avoiding the computer. A soldier can also terminate a class simply by flicking off a switch.

The various distractions implied by "tabletop training" and the increased control exercised by the distance learner makes motivation a key concern of both the instructor and team leader. Different motivational techniques will be effective for different individuals at different times in the course. Basic motivational techniques which have been used in previous SMART courses include:

- Using Army authority figures.
- Personal contact.
- Integrating competition into coursework.

INSTRUCTOR NOTES

- Verbal and/or written communication between the student and instructor. This direct contact can take different forms, including:
    - online positive reinforcement
    - online informational or reminder messages
    - online and telephone warning and counseling messages

USING ARMY AUTHORITY FIGURES

There are a number of effective ways to use supervisors or other authority figures to motivate students. Some suggested ways include:

- At the start of the class, ask a senior official to write a short motivational speech and put it online. To be effective, it is important to invite someone whose importance will be recognized by the student, such as the commandant of the school.

- Motivation can be increased by informing students that their successful completion of the course will be acknowledged by an authority of rank and prestige. As previously mentioned, it is important that students are aware of the person's significance.

MOTIVATIONAL TECHNIQUES

- Using Army authority figures.
- Personal contact.
- Integrating competition into coursework.
- Verbal and/or written communication between the student and the instructor.

BEST COPY AVAILABLE

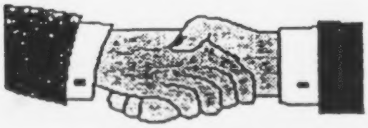
INSTRUCTOR NOTES

- Send a letter to each student's commander or section leader, announcing that the student is involved in a particularly challenging form of remote training. Ask the individual to discuss the experience with the student. This technique should increase the student's accountability for successful performance.

- Expert guests, like visiting officers, NCOs, or civilians, could be used to motivate the students. For example, in an EOAC course, the Chief of Engineers would be an interesting guest. He or she could put a short information paper online and then answer questions.

- Motivation can be encouraged by informing students in advance that the same Academic Efficiency Report (AER) and award criteria will be used in their SMART course as is used in a comparable resident course. The SMART class provides an instructor with many opportunities to evaluate a wide range of skills, such as leadership, communication, and writing abilities.

If students are to be recognized for outstanding performance, the standards for recognition should be coordinated with the sponsoring school.



PERSONAL CONTACT

A face-to-face meeting between students and instructors can be highly motivating, particularly if it occurs near the beginning of the class. Many organizations recommend at least one face-to-face meeting during a course, preferably at the beginning. However, in many instances, the cost or logistics can make such meetings impossible. It is important to know that the lack of a face-to-face meeting does not jeopardize the success of your course. Other techniques can be used to help develop a friendly rapport. For example, students and instructors can exchange pictures to add a personal touch. But more importantly, no face-to-face meeting will take the place of effective online communication.

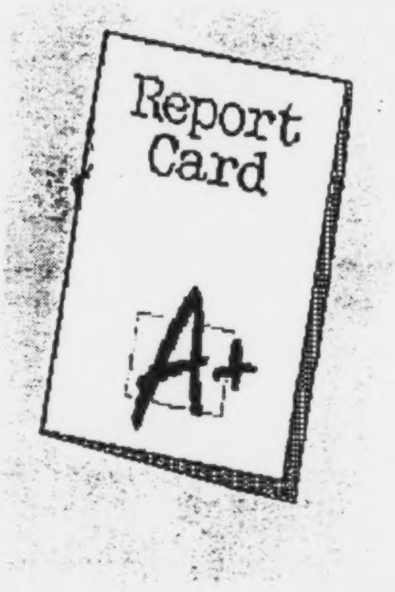
INTEGRATING COMPETITION INTO COURSEWORK

Instructors can use various forms of individual or group competition to motivate students.

INSTRUCTOR NOTES

For individual competition, you could have students compete for:

- ▲ The distinguished graduate of the class.
- ▲ The student with the most online responses (Quantity).
- ▲ The student with the best online responses (Quality).



Another useful technique to reward individuals is to put information online which pertains to class standings .

CAUTION: Use numbers or some other code so that individuals are not identified by name.

This online technique works well for students who are likely to fall into one of the following categories:

- ▲ "Self-starters": Some will want to do exceptionally well and will use the list to make sure they are ahead of their peers.
- ▲ "A 'B' and proud of it"student: Some will want to get by acceptably well and will use the list to stay up with others.
- ▲ "Get by" student: Others will strive hard to meet only the minimum requirements.
  The list will assist them by making sure that their peers are still within view.

INSTRUCTOR NOTES

For group/team competition, you could have teams compete for:

■ The team with the most online responses (Quantity).

■ The team with the best online response (Quality).

■ The team with the highest grade point average.

■ The team with the highest percentage of graduates.

After you decide on the type of competition, determine what kind of award will be given (such as extra credit points).

VERBAL AND/OR WRITTEN COMMUNICATION BETWEEN THE INSTRUCTOR AND STUDENT

Before discussing this motivational technique, it is important to note several points:

- This discussion is divided into three sections. The first section focuses on those online (written), techniques which motivate by positive reinforcement. The second section discusses online informational and reminder messages. The third section describes warning and counseling messages. This last section is further divided into online and phone communication.

- Most of the techniques discussed within these three sections represent positive reinforcement. It is usually better to encourage a student than to appear punitive. However, exceptions to this general rule are noted.

- This material pertains only to messages sent by the instructor to an individual student, not to the entire class.

- For online methods to be effective, the student must be logging on with some frequency. If not, a telephone call may be required.

Online Positive Reinforcement

In positive reinforcement, messages are sent which compliment a student for a specific task performance or which give recognition for generally doing a fine job. Each student should

INSTRUCTOR NOTES

periodically be sent an encouraging message. To determine the type of message, students may be divided into three groups: those who are doing well, those who are continuing to improve despite problems, and those with problems.

Examples for students who are doing well:

"You are doing a terrific job in the class. We REALLY appreciate your support. Keep up the good work!!!! Remember, I am here to help if you have any questions."

In addition to acknowledging a generally high level of performance, send messages regarding noteworthy achievement in specific cases.

- A student does well on a quiz. The instructor determines who qualifies, based on the difficulty level of the material.

Example: "You did exceptionally well on that last test. You got a 100%. Keep up the good work."

- The student asks a question or contributes an interesting point to the discussion.

Example: "That is a good question, Jean. I really had to think about the answer to that one. I know that the other students enjoyed your insight as well."

- A student is way ahead of the others in completing required assignments.

Example: "You are really flying! That is fantastic. Keep up the good work and you will stay ahead of everyone."

Miscellaneous: You may wish to send a message to a student who is celebrating a special event like a birthday or promotion. Get birth dates from everyone prior to class and ensure that no one is forgotten.

Examples for students who are improving:

- General message: "I am happy to see you are REALLY showing improvement in your class work. Keep pushing onward and upward. If you have any questions, let me know. I will be happy to answer them."

INSTRUCTOR NOTES

- For a student who has finally written a message after not logging on for several weeks: "I'm sure glad to see you online again. We REALLY appreciate your input."

- For a student who has logged on after a long absence: "Bob, I'm glad to see you back. We MISSED you. I'm here to help you in any way I can. You have only to let me know."

Examples for students having problems:

- "I see that you are having some problems with the pipeline course. You are NOT alone .... several others are also having problems with that part. Don't worry about your pace, just keep working. Remember, I am here to answer any questions you might have. There is nothing so tough that we can't solve it together."

- "I REALLY liked that comment that you made online the other day. Keep it up. It looks like you are falling behind a bit. Is there any way that I can help you catch up? If so, just let me know."

Informational or Reminder Messages

Messages may be sent to remind students of assignment completion dates or quiz/test dates. The purpose of such messages is to alert them to the priority status of the item. This type of communication is often enhanced if it is combined with positive reinforcement.

EXAMPLE: "You are doing an excellent job in this class, and I really appreciate your hard work. Don't forget that your paper is due by August 25. If you need any help, just let me know."

Warning and Counseling Messages

This kind of communication is designed to alert soldiers to something that they have forgotten or refused to do. In the most extreme case, such messages are a strong suggestion to change behavior "or else". This type of contact can be made **online** or by **telephone**, or both. Sample scripts are provided for both types of interaction.

INSTRUCTOR NOTES

Use warning and counseling messages only if other motivational techniques are ineffective.

● **Online Communication:** A student should be contacted in the following situations.

■ When a student is more than 50% behind and does not seem to be making any effort to catch up.

Example: "When we talked on the phone two weeks ago, you promised to meet a certain schedule to catch up with the rest of the class. You have not done so. If you don't make more of an effort to catch up within one week, you will be dropped from the course."

■ If a student refuses to work on group projects with the others in his group, the welfare of the team may be at risk. In the event of nonparticipation, the following message can be sent.

Example: "Over the last couple of weeks, I have talked to you about helping your teammates. You have refused to do so. Unless you start working with the others, you will fail this part of the class and will have to retake it."

■ If students put up comments that are either rude or in bad taste, a message should be sent which alerts them to their insensitivity. This message is not intended to supplement military discipline, but to remedy the problem before more serious action becomes necessary. The first message, and, hopefully, the only one required, should be written as much to educate as to discipline.

Example. "I don't know if you realize it, but the comment you made to Bob the other day was taken as an insult. Many times it is difficult to communicate clearly on the computer because of the lack of nonverbal cues. He didn't think you were joking. Please review your comments before you send them. If you have any questions about a comment you are going to make, I will be happy to review it for you."

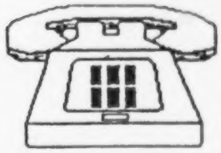
■ However, if a student persists in making rude or gross comments, you will have to use stronger language.

INSTRUCTOR NOTES

Example: "I have messaged you several times about not using sexually oriented types of jokes. Those jokes are unacceptable and if you persist in using them, you will be dropped from the course."

■ If a student is insulted or hurt by the comments of another, it is important to send a positive message to defuse the situation.

Example: "I could tell that Tom hurt your feelings with that comment he made the other day. I spoke to him about it and he told me he did not mean to imply anything negative. In computer conferencing, it is sometimes difficult to determine someone's intent, because you can't see the expression on their face or hear their tone of voice. I have been on the receiving end of some of those ambiguous comments. It has taught me to be patient and to ask the other person exactly what he or she meant. Keep up the good work. You are one of my best students."



● **Telephone Communication**: Phone calls work more effectively than online communication at times because:

▲ People are more familiar with the telephone and the kinds of interactions it allows than with online communication.

▲ It is usually easier to get faster responses to questions if you can successfully reach them.

▲ People are less likely to avoid a problem situation by unplugging the phone. In contrast, they can try to evade you by refusing to logon to the computer.

A student **should be** contacted by **phone** in the following circumstances:

■ When one falls significantly behind the class, it is sometimes the result of a complex or personal problem which cannot be easily resolved

INSTRUCTOR NOTES

by a short exchange of computer messages. The following scenario has proven to be effective in this type of case.

Step 1. Be friendly and greet the student with a pleasant attitude. **DO NOT** start the phone conversation negatively!

Step 2. Explain why you are calling. For example, "You are lagging significantly behind the other students."

Step 3. Ask about the problem. It is important to listen very carefully to the explanation. Sometimes, the first reason given is not really the main one.

Step 4. Work to develop a plan that will resolve the problem. It is important to be very specific so that both of you are clear on what is expected. For example, if the student is behind, the plan could be a set of milestones:

Finish task 1 by 3 July 1989.
Finish task 2 by 5 July 1989.
Finish task 3 by 7 July 1989.
Take test on task 3, 9 July 1989.

Step 5. Explain that failure to meet these deadlines will result in either expulsion from the course or some other disciplinary action.

Step 6. If the student resists making these commitments, determine whether the student really does want to drop the class. If you sense this is the case, turn the individual's name over to the administrator as a potential drop candidate.

A special case: Someone who is absent from the class for days or several weeks should be called upon return. In long courses, it is reasonable to expect that students will be absent for at least two weeks. Upon returning, there will be considerable pressure to catch up, pressure which may be overwhelming for marginal performers. Call the student to help establish a realistic schedule to regain momentum.

■ Any student who is not fulfilling obligations in expert groups or small working groups should be phoned.

INSTRUCTOR NOTES

Step 1. Be friendly. Do not start out by being negative.

Step 2. Explain the reason for your call, being direct and honest.

Example:

Instructor: "I have been looking over the records of the last group project that you were involved in. You are spending about half as much time online as the other members of your group. Now, I know that online work is not everything. I assume you are spending a lot of time working offline. Is that correct?"

Student: "No. I have just not had the time to help. My wife is just about to have a baby and I have had to work extra hours to pay the bills. The situation will stay the same for another month or so."

Instructor: "I understand. You need to let us know when you are having problems. Everyone in the class has or will have a major problem of one kind during the year. Just let us know. That's all we ask."

Student: "I'm sorry. I thought I could handle everything but I was wrong."

Instructor: "How much time do you think you can spend on the course?"

Student: "About four hours a week."

Instructor: "All right, do what you can. We will try to help you through this by developing a schedule to help you catch up when the situation eases on you."

■ A student making vulgar or sexist comments should be contacted as soon as possible. In such situations, the following scenario has proven effective.

Step 1. Be friendly. Do not begin the call by being negative.

Step 2. Explain the purpose of your call. For instance:

Instructor: "Bob, do you know why I'm calling?"

Student: "No, not really."

Instructor: "Today, when you told that sexist joke, you used language that offended me and some of the others. That kind of joke is simply not acceptable in this class."

INSTRUCTOR NOTES

Step 3. Get the student to agree to avoid these comments in the future.

Step 4. If the student is uncooperative, then some form of discipline may be your next recourse. However, use discipline only as a last resort.

■ Flaming is the most serious situation requiring a call from the team leader or instructor. Flaming is an emotional outburst online which exceeds the standards of acceptable behavior, as illustrated in the enclosed caption below. Flaming can be directed at either the instructor or the student. Flaming is an exceedingly tricky problem which must be resolved quickly before it has a negative effect on group unity. Solving the problem involves counseling both the offender and the individual who was hurt or offended by the outburst.

Counseling the offending student

Step 1. Try to determine the reasons for the outburst. It may be difficult to do this, but rereading earlier sections of the course transcripts may provide clues or give signs of increasing stress. Consulting with other members of the team may also provide clues.

Step 2. Try and determine whether the student who flamed had any justification for the emotions expressed. While there is never

Mar23/89 22:22
18:24) STUDENT X: Header: Time To Pack It In

I'm sick and tired of your stupid comments that don't help in solving anything. How you ever got to be an officer in the U. S. Army is beyond me. Obviously you're incompetent and can't do the assigned tasks. My recommendation to you good buddy is to pack it up, send back your computer, and enroll in a class that you might be able to pass. Obviously, it's not this one!!!!

INSTRUCTOR NOTES

any excuse for being rude and insensitive, the student may have confused aggressive leadership with poor conduct. For example, the student may have been trying to motivate a group whose members were falling increasingly behind schedule.

If there is some identifiable justification for the outburst, the following actions might be taken.

Step 1. Have the student apologize to the other members of the class.

Step 2. Discuss more effective ways of interacting with others in that particular situation.

Step 3. If the student flamed because of feelings of excessive pressure, the team leader or instructor can volunteer to help. For example, if no one in the group is working on a project, one of the team personnel could volunteer to call the others.

If there was no identifiable justification for flaming, team personnel must be even more sensitive. For example, the student could have flamed because of pressures at home or work which were unknown to anyone in the course. The following actions should be considered:

Step 1. Call and try to determine the reason for the incident. Remember, the reason given may not be the most basic one. For example, the student could be irritated with the other group members, but flamed because of major problems at work.

Step 2. If possible, help by suggesting solutions.

Step 3. The student should be encouraged to apologize online to the other members of the team. If the flaming was directed toward a single individual, it may be more effective to recommend telephone contact between the students.

Counseling the student who was hurt/offended

Calling these individuals will require various approaches which will depend upon the nature of the insult and the personalities

INSTRUCTOR NOTES

involved. For example, the student may have helped provoke the flaming through nonparticipation. Conversely, the student may be an innocent bystander. Use your own good judgment.

Example: "Bob, you know that Bill was right. You really haven't participated as much as you should have. There was no justification for the language he used, but I think you can understand why he was so frustrated. Will you help take the pressure off him by starting to do your part?"

MAJOR WAYS TO INFLUENCE YOUR STUDENTS

- **Do not be afraid to be warm and friendly in your contact with students. Studies have shown that distance students find the "human element" to be indispensable in their interaction with an instructor as well as with other students.**

- **Personal contact can also help keep students working at a steady pace. Students' motivation can sometimes drop after the completion of major assignments or even as the course progresses. Contacting your students can help reduce fluctuations in their performance, although you can still expect lower rates of activity around holidays and at the conclusion of demanding projects.**

- **You should contact students as soon as possible after they enroll, even if it means using a phone instead of a computer. Prompt contact after enrollment can increase student completion rates.**

- **It is important to provide extra encouragement and support during the first weeks of the class. Students will encounter problems both with the computer and software, regardless of how well the equipment functioned prior to shipping. Your support will help them through this difficult period.**

INSTRUCTOR NOTES

COURSE PREPARATION DUTIES

Your course preparation duties will probably occur in an order similar to this:

Step 1. Receive the roster for the class. Upon receipt, immediately contact the manager for network operations and obtain ID designations and passwords.

Step 2. Contact students by letter or telephone to determine any special needs, such as Typing Tutor programs or DOS tutor programs.

Step 3. As an instructor, it is unlikely that you will be involved in shipping computer hardware, software, and course materials directly. **IF**, however, this is an assigned task, **THEN** follow the procedures given in Step 4. **IF** this is not an assigned task, **THEN** furnish the information from Step 2 to the designated preparer and ensure that Step 4 is properly executed.

Step 4. Complete the following activities, according to local doctrine.

▲ Obtain student names, addresses, telephone numbers, ID designations, and passwords.

▲ Assemble all items to be packed in the student's box (Note: these items may not be the same for all if some are furnishing their own computers or other hardware/software).

▲ Inventory the items to be packed. These items will include:

● PC compatible computer, printer, and printer paper.

● Integral modem.

● Network interface software.

● Personalized "user" file(s) for each student. Ensure that the proper ID and password have been loaded into all files for each individual.

INSTRUCTOR NOTES

- Course related software, such as CAIs and storyboards.

- Auxiliary software as required (for example, word processing and spreadsheet programs).

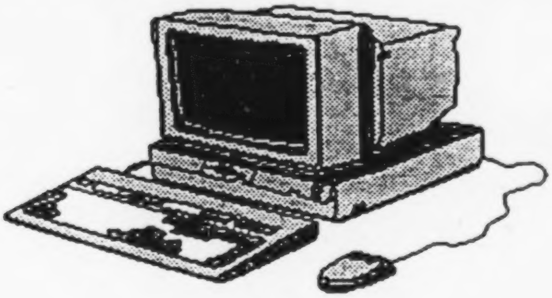
- Course materials, including syllabus, TMs, FMs, notetaking guides, review guides, illustrations, video discs/tapes, personal record sheets, and any other required materials.

- Hand receipt (DA-602) with correct inventory and serial numbers for all returnable software and hardware items.

- Packing list for all other items in the box.

- Instructions for setting up the computer and loading software.

Step 5. Immediately after computer hardware/software and course material shipment, place a message online to each student, requesting that they check in.



IF any student has not checked in within 15 days of your first message, **THEN** call and offer help in getting equipment set up, software loaded, or getting online.

IF the student cannot be reached by telephone, **THEN** send a registered letter asking that he/she call you at a specified time and date "so that I can help solve any problems you are having in getting online."

Step 6. **IF** the student does not check in online and has no reasonable excuse for not doing so, **THEN** drop the individual from the course in accordance with local and school doctrine and recover all equipment.

INSTRUCTOR NOTES

INSTRUCTOR NOTES

INSTRUCTOR NOTES

INSTRUCTOR NOTES

ACTIONS

ACTION 1: Go through each step of the setup guide, step-by-step, asking the student to verify each step as it is taken. Often, the student will have plugged a connector into the wrong receptacle. After the setup guide has been completed, return to the question list and complete the checkout.

ACTION 2. Ensure that the equipment has been plugged into a working outlet by asking the student to plug some other appliance (such as a lamp or a hair dryer) into the outlet and verifying that the outlet actually works. Then have the computer cord traced to the wall outlet and make sure that the student has plugged in the proper cord.

ACTION 3. If everything seems to be on and working, but there is no DOS prompt on the screen, then ask if there is any other message on the screen.

- If there is a NONSYSTEM DISK or DISK ERROR message, then have the student check to make sure that there is nothing in the A: disk drive. Respond to any other messages appropriately per your DOS manual. As a last resort, have the student turn the computer off, insert the DOS BOOT disk, and turn the computer on.

- If the A: DOS prompt appears, have the student type FORMAT (space) C:/, then reload all of the software according to directions.

- If when restarting the computer with the DOS BOOT disk in the drive, the message still appears, then the disk drive was damaged during shipment and the computer must be returned for repair and a replacement computer.

ACTION 4. If there is no menu listing on the screen, then have the student reload all of the software according to directions.

ACTION 5. If everything looks normal, but the student cannot get into the course software, then have the course software reloaded according to directions.

ACTION 6. Have the student reload any problem software according to directions.

COMPUTER HARDWARE AND SOFTWARE PROBLEMS

If there is not a designated hotline for computer hardware/software problems, or if students cannot contact the hotline and need help, you should be able to help them. However, do not hesitate to admit being beyond your depth of expertise. There are some common problems, however, that are fairly simple to solve.

You should begin your troubleshooting procedure by asking the student the list of questions found in the table below. IF the student answers NO to any of the questions, THEN identify the action number in the table and locate the corresponding description of the action on page C-9. IF all of the questions have been answered YES, THEN inquire as to what the problem is. If it is the inability to manipulate the net, coach the student from your own experience.

QUESTION	IF answer is NO, THEN refer to:
Did you use the setup guide to set up the computer system?	**ACTION 1**
Does either the power light, disk drive light (red), or the monitor come on?	**ACTION 2**
Do you see a C:\DOS message on the screen?	**ACTION 3**
Do you see a menu listing on the screen?	**ACTION 4**
Can you get into the course software?	**ACTION 5**
Can you get into all of the other software programs?	**ACTION 6**

STUDENT BEHAVIORAL PROBLEMS

IF the problem concerns	THEN turn to
General student motivation	Page B69
Identifying a potential dropout	Page B39
Students not logging on or participating in class activities	Page B81
Students using offensive online communication	Page B83
Understanding how and why your students learn and behave as they do	Page A27

BEST COPY AVAILABLE

NORMAL CLASS OPERATIONS

IF the problem concerns	THEN turn to
Establishing class norms and requirements	Page B13
Initial course preparation activities	Page B97
Online etiquette	Page B3

BEST COPY AVAILABLE

INDIVIDUALIZED INSTRUCTIONAL TECHNIQUES

IF the problem concerns	THEN turn to
Individual tutoring	Page B65
Progress tests	Page B63
Quizzes	Page B61
Written papers	Page B59

GROUP INSTRUCTIONAL TECHNIQUES

IF the problem concerns	THEN turn to
Expert groups	Page B43
Group discussions	Page B29
Peer tutoring	Page B25
Small group exercises	Page B35
Synchronous briefings	Page B49

BEST COPY AVAILABLE

UNDERSTANDING THE SMART ENVIRONMENT

IF the problem concerns	THEN turn to
Explaining the SMART electronic classroom concept	Page A9
Understanding the concepts of net, topic or item, and response or discussion	Page A17
Understanding what SMART is	Page A3

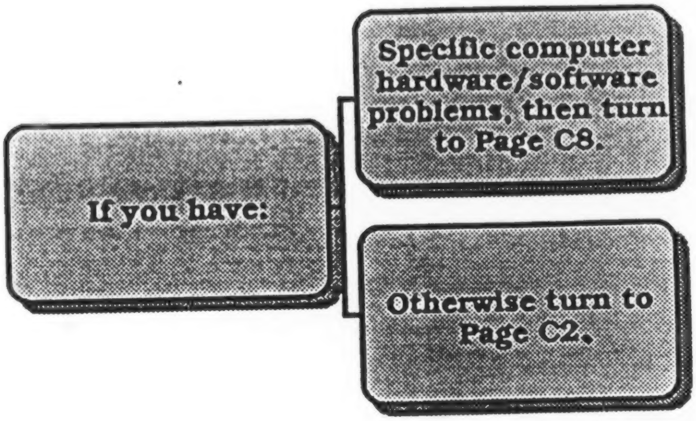
BEST COPY AVAILABLE

BEGIN HERE

IF the general problem area is in	THEN turn to
Computer hardware/software	Page C8
Understanding the SMART environment	Page C8
Group instructional techniques	Page C2
Individual instructional techniques	Page C3
Normal class operations	Page C4
Role of the SMART instructor	Page C5
Student behavioral problems	Page C6

BEST COPY AVAILABLE

SECTION C



If you have:

Specific computer hardware/software problems, then turn to Page C8.

Otherwise turn to Page C2.

BEST COPY AVAILABLE

INVENTORY CHECK LIST

✓ Computer, printer, and printer paper.

✓ Modem

✓ Network interface software

✓ Personalized "user" files

✓ Course related software

✓ Auxiliary software

✓ Course materials

✓ DA-2062 hand receipt

✓ Packing list

✓ Set up instructions